THE GRILL

ROCKY MOUNTAIN COLD
Amory Lovins has big ideas for cutting data center power use — like using slush for cooling. **PAGE 16**

NO WAITING
A trade group will certify products to a draft of the 802.11n standard. **PAGE 8**

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MAY 21, 2007 ▪ VOL. 41 ▪ NO. 21 ▪ $5/COPY

IT Execs Unmoved By Microsoft's Open-Source Gripes

Vendor claims that Linux and other products violate 235 of its patents

BY TODD R. WEISS

Microsoft Corp.'s claims that open-source technologies infringe on 235 of its patents irked some IT managers last week, while others said they viewed the patent offensive as nothing more than a standard corporate business tactic.

But none of the half-dozen IT executives who were interviewed about Microsoft's infringement assertions plan to change their open-source adoption strategies — at least, not unless and until there's a good reason for them to do so.

"To throw out broad statements to the marketplace doesn't help anyone. No one wins."

DARRYL LEMECHA, CIO, CHOICEPOINT INC.

Among the users in the irked camp was Darryl Lemecha, CIO at data aggregator ChoicePoint Inc. The patent claims sounded like "more saber-rattling on Microsoft's part," Lemecha said via e-mail.

"To throw out broad statements to the marketplace doesn't help anyone," he wrote. "It creates uncertainty for the open-source community and causes animosity toward Microsoft. No one wins."

ChoicePoint isn't a major user of open-source technology, but it runs Linux servers as well as Unix, Windows and mainframe systems. The Alpharetta, Ga.-based company respects Microsoft's desire to defend its intellectual property, Lemecha said. But, he added, the software vendor's claims weren't specific enough to be worrisome at this point. "Nor have they been clear on their planned actions," Lemecha said. "We will not change our plans, but we will watch where this goes."

Joe Lindsay, CIO at Secured Funding Corp. in Costa Mesa, Calif., said Microsoft's maneuvering may scare some users away from Linux and other open-source software in the

Microsoft, page 48

NEWSPAPER

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Encryption: It's Time

Old objections to encryption are fading, Gary Anthes reports. And with high-pain data mishaps in the news, the need has never been greater.

Page 27

Local Officials in Texas Criticize Voter Database

Registrars hit statewide system for losing valid voters, performance woes

BY MARC L. SONGINI

Hiccups in a new centralized voter database in Texas are bogging down the registration process and ejecting eligible voters from the rolls, say local election officials.

"Technology should improve our productivity, not create unnecessary additional burdens," said Cheryl Johnson, Galveston County's tax assessor-collector, who has lodged a number of formal complaints about the system's performance and its problems in retrieving historical records.

The database, called the Texas Election Administration Management system, was built to store and analyze voter registration data from the state's 254 counties. TEAM checks all voter registration applications against driver's license data and Social Security numbers to ensure that potential voters are qualified.

County elections officials have been peppering the state with complaints about TEAM since it went live in January. The protests increased markedly after statewide local elections were held on May 12.

In some cases, Johnson said, TEAM problems forced workers in Galveston County to gather voter data from other sources to prove eligibility, which is often a time-consuming process.

"TEAM has adversely impacted productivity in the Galveston County voter registrar's office as well as negatively impacted many of our voters," she said. "This has been very hard. This is enough to get me thrown out of office."

The $14 million system was built by IBM

Texas, page 14

INSIDE

Florida's county clerks get three more years to black out data in online records. PAGE 8

The Highly R

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NCsoft WON'T PLAY WITH LINUX, CHOOSES WINDOWS SERVER INSTEAD

Tom Nagy for The Highly Reliable Times

UP TO 400,000 GAMERS AROUND THE WORLD can connect to NCsoft's game service simultaneously.

Microsoft

eliable Times

www.microsoft.com/getthefacts

special edition

Reliability Is Essential for Online Game Company

By CHANG SUN PARK

SEOUL, Korea – NCsoft, an international online game company based in Korea, has an infrastructure that allows 400,000 users to connect to its game service simultaneously, with up to 10 million users per year all around the globe. To accommodate this load, NCsoft runs nearly 1,000 large-scale server farms capable of handling 40 terabytes of data. It is, in short, a massive system that cannot afford downtime.

That need for bulletproof reliability is why NCsoft chose Microsoft® Windows Server™, according to Kwak, Soon-wook, Director/Chief of Publishing Unit at NCsoft. "Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency," said Kwak. "It was an easy choice to make."

Indeed, it was a choice that was critical to the continuing success of NCsoft, according to Corporate PR Team Leader Joo Young Kim. "The importance of online stability is paramount; in the case of games such as *Lineage* 2, our gaming contract with our customers states that an interruption lasting over four hours will result in consumer compensation. The Windows Server platform offers reliable service to hundreds of thousands of simultaneous online users, and therefore plays a crucial role in protecting the fantastic reputation that *Lineage* enjoys," said Kim.

For the full NCsoft story, plus other case studies and independent research findings on the reliability of Windows Server versus Linux, visit microsoft.com/getthefacts

DOWNTIME VERY UNPOPULAR: A recent

SPECIAL REPORT: Stunning discovery of secret to success

NCsoft's Kwak, Soon-wook (above) stated yesterday that Windows Server is the secret behind maintaining the reliability and performance of their system.

EXCLUSIVE INTERVIEW:

"Before we implemented our server system, we directly compared Windows Server with Linux on a variety of different criteria. Windows Server 2003 provided not only reliability, which is our first priority, but also development productivity in a 64-bit environment, and cost-efficiency. It was an easy choice to make."

— Kwak, Soon-wook, NCsoft Director/Chief of Publishing Unit

ARE YOU AVAILABLE? Reliability, dependability, and availability were found to be the favorite words of SysAdmins around the globe, according to a new research study published

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8 County clerks in Florida are being given three more years to redact personal data from online images of public records.

10 Health IT projects require advance planning and aggressive end-user support to be successful, according to IT execs at the HIMSS Virtual Conference.

10 Boulevard Brewing lost business because of a two-day e-mail shutdown, so it replaced its server infrastructure and turned to a hosted e-mail service.

14 Unisys promises to continue upgrading its proprietary mainframe processors even as it adds more Intel-based systems to its high-end computer lines.

16 The Grill: Amory B. Lovins, chairman and chief scientist at the Rocky Mountain Institute, talks about breaking out of stovepipes, designing IT systems for greater efficiency, and cooling data centers with slush.

18 Global Dispatches: Norwegian officials are evaluating a recommendation that ODF be adopted as the government's standard document file format.

22 Hitachi introduces a renamed version of its Universal Storage Platform that includes thin-provisioning capabilities and updated virtualization software.

STRATEGIES & TACTICS

DAVID CLARK

How to Build a Better Web Site

What does it take to deliver great customer service in cyberspace? Follow these tips, and your customers will beat a path to your URL.

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MICHAEL MORGENSTERN

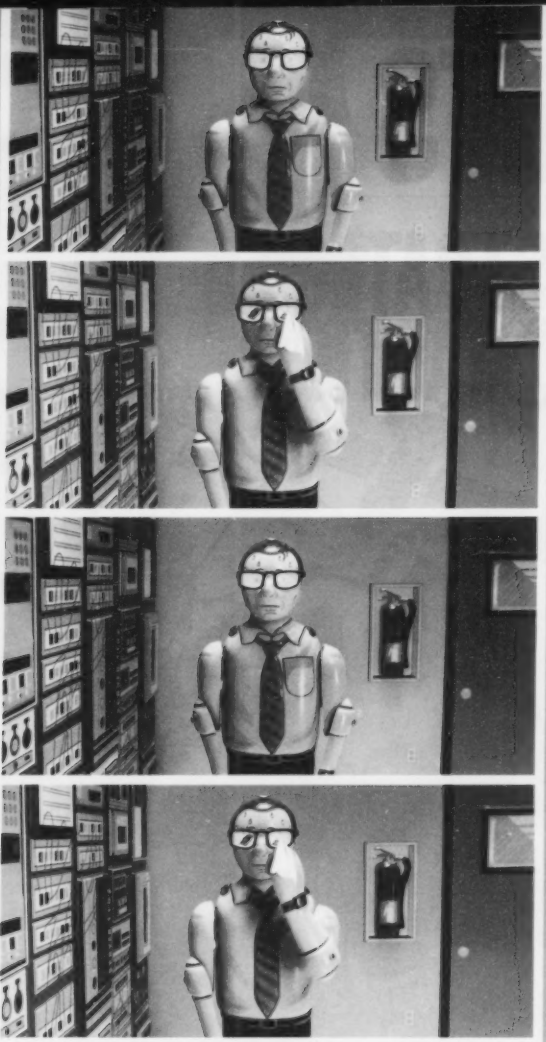
27 Encryption: It's Time. A series of high-profile, high-pain data security mishaps have forced management to recognize the importance of encryption. Meanwhile, hardware and software vendors have been whittling away at the traditional objections to encryption, including concerns about performance and the difficulty of managing keys.

36 Security Manager's Journal: Flood of Virus Alerts Is a Test of Processes. Incident response is a low priority at C.J. Kelly's agency, but the system gets a test-drive when virus alerts start pouring in.

38 Future Watch: What's in Store in Robotics. Takeo Kanade, a professor of computer science and robotics at Carnegie Mellon University, predicts that robots will one day do more than vacuum your carpets. They will train you and advise you — and maybe even help out with the cooking.

40 Split-Second Trading. Wachovia is tearing down its systems silos and replacing them with a new grid infrastructure that stretches seamlessly across the company's many investment products and business functions.

KAZUHIRO NOGI/AFP/GETTY IMAGES



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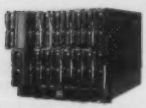

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24 **Bruce A. Stewart** takes a look at a company that seems to have hit on an IT organizing principle that really works.

42 **Bart Perkins** offers guidelines for setting up a program for effective records management — something we all need these days.

50 Frankly Speaking: **Frank Hayes** doubts that the fall TV schedule will do much to change the public's impression of IT, but the Society for Information Management might actually be on to something in its efforts to change that perception.

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COMPUTERWORLD.COM THIS WEEK

TOP STORIES

Lotus Notes Gets a Face-lift

SOFTWARE: Notes Beta 8 sports an overhauled interface and new features such as a built-in RSS reader and threaded e-mail "conversations" viewable within individual messages. Is the notoriously unfriendly interface finally easier to use? Check out our review and visual tour.

www.computerworld.com/software

SHARK BAIT BETA

An 'RTFM' Problem

I used to manage a PC clone store back in the '80s. We had sold an 8086 (a scorching 10-MHz machine!) clone to a customer, and he had brought it back to us because he couldn't access his hard drive.

http://sharkbait.computerworld.com

Five Hidden Costs of Computing

HARDWARE: Lost productivity. Health problems. End-of-life expenses. There are a number of ways computers can take an unexpected toll on end users and businesses alike. Here's how to minimize the potential impact.

www.computerworld.com/hardware

Is Speech Recognition Finally Good Enough?

NETWORKING: With better hardware, improved algorithms and gentler learning curves, the technology may finally be living up to its 10-year-old promise.

www.computerworld.com/networking

Make Tiger Roar Like Leopard

SOFTWARE: Tired of waiting for Mac OS X 10.5 Leopard? Make the wait easier with tools that add power, pizazz and some Leopard-like features to OS X 10.4 Tiger.

www.computerworld.com/mac

Performance Review Opportunities

CAREERS: Does the thought of your next performance review make you cringe? Columnist Katherine Spencer Lee explains why you should see the process as an opportunity — and why you ought to start preparing for it now.

www.computerworld.com/careers

Will Privacy Fears Stifle New Medical Frontiers?

IT MANAGEMENT: Jay Cline examines what the pharmaceutical industry is doing to address concerns that breakthroughs in electronic medical record-keeping will threaten personal privacy.

www.computerworld.com/itmanagement

BLOG SPOTLIGHT

Social Sites Off Limits

The Pentagon is cracking down on the use of blogs and social networking sites by military personnel. Now the enemy can't read about our soldiers' activities – but neither can we, writes columnist Preston Gralla.

www.computerworld.com/blogs/node/5512

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AT DEADLINE

Alcatel-Lucent Loses CD of Worker Data

A CD containing personal data about thousands of Alcatel-Lucent employees, retirees and their dependants has been lost or stolen. It contains the names, addresses, Social Security numbers, dates of birth and salary information of U.S. employees who worked for Lucent Technologies Inc. prior to its merger with Alcatel SA. The disk was prepared by Hewitt Associates LLC, which administers the company's benefits plans.

First Data Hires TD Ameritrade CIO

First Data Corp. has named Jerry Bartlett, former CIO at TD Ameritrade Holding Corp., senior vice president and chief technology officer of its First Data Resources Inc. unit. At TD Ameritrade, Bartlett oversaw all IT initiatives, including business technology planning, application development, information and physical security, and IT infrastructure and architecture.

HP Sales Rises 13%, But Profit Falls 7%

Hewlett-Packard Co. reported a 13% increase in its second-quarter sales, attributing the performance to strong sales of PCs and of software gained in its acquisition of Mercury Interactive Corp. However, profits fell 7%.

HP BY THE NUMBERS		
REVENUE		
Q2 '07	$23B	$1.8B
Q2 '06	$21B	$1.9B

Microsoft to Buy Marketer for $6B

Microsoft Corp. has agreed to acquire aQuantive Inc. for about $6 billion in cash. Microsoft said the digital marketing services agency's 2,600 employees will join its online services business, which is charged with boosting advertising on its MSN portal, Windows Live online services, Xbox Live gaming platform and Office Live services. The deal is expected to close by year's end.

Compliance Testing Starts Early for New Wi-Fi Spec

Trade group to certify 802.11n products 21 months before expected ratification

BY MATT HAMBLEN

THE WI-FI ALLIANCE trade group next month plans to begin certifying products as compliant with a new draft version of the 802.11n standard for wireless LANs — a process that will precede the expected ratification of the standard by nearly two full years.

The 802.11n standard promises faster speeds and a longer connection range than the current generation of Wi-Fi technologies provides, as well as better performance for streaming media. But the timeline for 802.11n's ratification has been extended to March 2009, and network managers at many large companies have voiced concerns about moving to WLAN products that aren't based on the final version of the standard.

For example, Clifton Naughton, director of network services at The Boeing Co., said last week that the Chicago-based airplane maker remains unwilling to use so-called pre-certified 802.11n products.

"Boeing will not install any device into production until there is a ratified 802.11n standard and products are shipped [by vendors]," Naughton said. But he added that the company, which has over 3,000 wireless access points in manufacturing plants and office buildings nationwide, will likely do "some lab testing with 802.11n prior to the standard being ratified."

The Wi-Fi Alliance, which represents about 300 vendors, said it will test the interoperability of Wi-Fi products with 802.11n Draft 2.0, an early version of the standard that was released in March.

The testing plans follow a move earlier this month by the 802.11n working group within the Institute of Electrical and Electronics Engineers to push back the standard's expected ratification date from an earlier target of October 2008.

Karen Hanley, the Wi-Fi Alliance's senior director of marketing, said that with final ratification now even further away, the trade group hopes its pre-certifications will give users "a higher level of confidence" about Draft 2.0 products.

Craig Mathias, an analyst at Farpoint Group in Ashland, Mass., said he expects many 802.11n products to be on display at the Interop Las Vegas 2007 trade show this week, including some based on Draft 2.0. He predicted that the final version of the standard will include only minor changes from Draft 2.0. "No one should fear proceeding," he said.

But Paul DeBeasi, a Milford, Mass.-based analyst at Burton Group, said he expects a "very slow adoption" of Draft 2.0 products, even with the Wi-Fi Alliance's certification blessing. "For the conservative enterprise users, what this means is that practically, they will not start buying 'n' equipment until 2009," DeBeasi said.

John Tuman, director of network services at WakeMed Health & Hospitals in Raleigh, N.C., said the throughput of existing Wi-Fi technologies is sufficient for his users. The certification plan is "an interesting development," he said. "However, we have no plans to pursue 802.11n at this time." ▸

FAQ: 802.11n

■ **How does 802.11n differ from earlier generations of Wi-Fi?** The most notable new technology is called "multiple input, multiple output," or MIMO, which uses several antennas to simultaneously transmit up to three streams of data and receive two.

■ **What are the expected benefits of 802.11n?** Significantly greater speed and range. Intel Corp. says it's seeing real-world speeds of up to 140Mbit/sec. on 802.11n devices, almost six times faster than 802.11g technology's typical 24Mbit/sec. maximum.

■ **Why is ratification of 802.11n taking so long?** There was a rift between vendors over the best technical approach to take. That has been resolved, but a Draft 3.0 version still has to be approved before the standard is finalized.

– DAVID HASKIN

Florida Allots More Time For Blacking Out Data

BY JAIKUMAR VIJAYAN

State lawmakers in Florida have voted to give county clerks there three more years to black out Social Security, bank account and credit card numbers, as well as other personal data contained in images of public records that are posted on county Web sites.

The Florida Senate this month voted 40-0 to approve a bill that gives county clerks until Jan. 1, 2011, to redact personally identifiable data from images of title deeds, tax liens and other public records filed with their offices. The state's House of Representatives passed the same bill in a 115-0 vote in April.

The county clerks were originally given until the beginning of this year to block the personal data from public view. That deadline was pushed back to the start of 2008 last year.

Laying Blame

"The whole thing is just stupid," said B.J. Ostergren, a privacy advocate in Richmond, Va., who runs a Web site called The Virginia Watchdog. "It's unbelievable that they are [extending the deadline again] just because some clerks are whining and moaning that it can't be done. How dumb is that?"

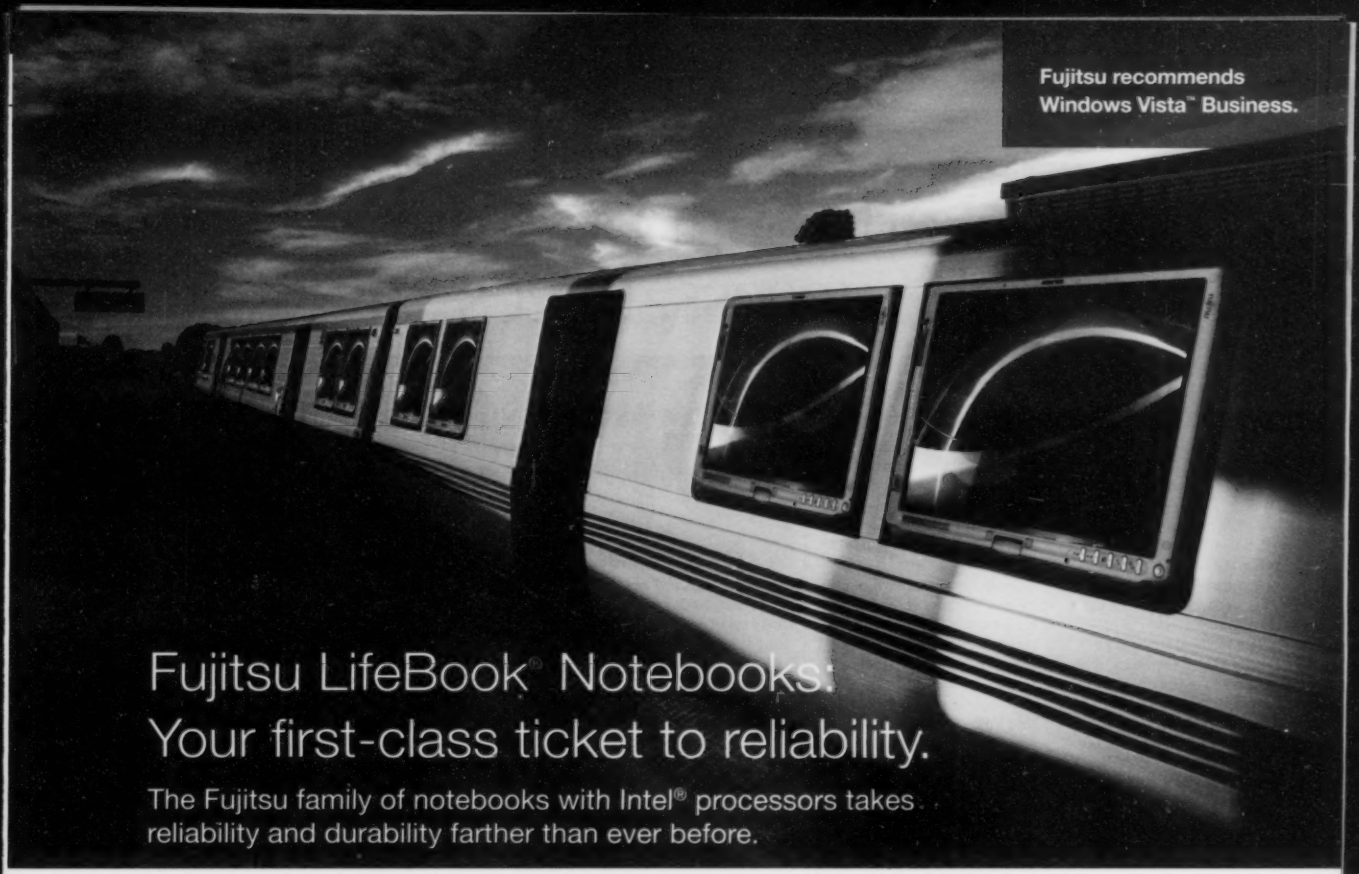
But David Ellspermann, clerk of the circuit court in Florida's Marion County and legislative chairman of the Florida Association of Court Clerks and Comptrollers, said the extension has little to do with redacting public records. It was largely driven by the need to give officials more time to remove personal data from tens of millions of court documents, some of which are also available online, said Ellspermann.

He added that instead of creating separate deadlines, state legislators decided to give county officials more time on both types of documents.

According to Ellspermann, Marion County was the first in the state to complete its public-records redaction work more than a year ago. The county inspected 14 million public documents dating back to 1965, and about 4% of them contained personal data that needed to be redacted, he said.

Last fall, the comptroller's office in Florida's Orange County completed an 18-month redaction effort in which it reviewed more than 12 million public records containing over 30 million pages. Carol Foglesong, the county's assistant comptroller, said at the time that nearly 800,000 pages — about 2.5% of the overall total — were found to contain personal data.

But finding and redacting the data can be a huge task. Orange County's project, for example, cost about $750,000 and involved the use of redaction software backed up by manual checks of images. ▸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Planning, Early Support Key To E-health Success, Execs Say

Health IT veterans say the result of such efforts is worth the struggle

BY HEATHER HAVENSTEIN

WHEN a major IT project is implemented at Ohio State University Medical Center, the IT shop sends out several "redcoats" — designated helpers for users who are struggling with the new system.

The medical center's IT services team members, who wear coats in the university's scarlet to be easily identifiable, are credited with playing a key role in the successful rollout several years ago of an electronic medical records (EMR) system.

At last week's Healthcare Information and Management Systems Society's Virtual Conference & Expo, IT executives who have overseen successful EMR initiatives and other health IT projects offered tips for health care companies looking to implement such systems.

"[The EMR] is a whole new application" for health care firms, said Detlev "Herb" Smaltz, CIO at the Columbus, Ohio-based medical center. "They have been doing things with paper charts forever."

Smaltz stressed the need for support teams like the medical center's redcoats to ease the transition. "You can do as much training as you want upfront, but invariably there will be a number of folks who will need some help," he said.

Smaltz suggested that user response to major new applications in the three weeks after going live can "make or break" a project.

He also noted that the OSU medical center leaned heavily on its project-level steering teams during the implementation phase to quickly address questions about required changes to business processes. "That is the thing that holds up projects — all the decisions about business process changes you have to make," he added.

Smaltz said that 90% of physicians working at the center's six hospitals use the EMR system, which is now being rolled out to the offices of affiliated physicians.

Longtime EMR user Salvatore Volpe, a physician who practices in Staten Island, N.Y., added that detailed, upfront planning is critical to avoid the "headaches and heartaches" that EMR projects can cause small and large operations alike.

You can do as much training as you want upfront, but invariably there will be a number of folks who will need some help.

CIO, OHIO STATE UNIVERSITY MEDICAL CENTER

Volpe also advised potential EMR users to conduct hands-on tests of multiple EMR applications before selecting one.

"The only way to know if these products fit into your particular workflow is by actually using them," Volpe said.

Denni McColm, CIO at Citizens Memorial Healthcare in Bolivar, Mo., credited the hospital's success with EMRs to the support of the company's administrators and to the fact that IT worked closely with physicians and staff members before, during and after the move to paperless patient records.

The $8 million Citizens EMR effort was completed in December 2003, she said. Today, the hospital has some electronic records of previous care for 95% of patients who walk through its doors, said McColm.

And, she added, all of the hospital's physicians are using computerized order-entry systems to request medication for patients, except in some emergency cases.

Laura Jantos, a principal at ECG Management Consultants Inc., a Seattle-based health care IT consulting company, suggested that health care organizations move quickly to implement EMR projects.

She said that organizations that do quick implementations of EMR systems with deep functionality will recover from start-up financial and productivity losses faster than those that move slowly to lessen the impact of such a cultural change. ▸

Failure Prompts Brewery to Tap Hosted E-mail Service

Boulevard also adds 12 servers and VMware virtualization tools

BY BRIAN FONSECA

Boulevard Brewing Co., which filled its first keg of beer nearly 20 years ago, certainly understands the value of serving its beverages ice cold. Unfortunately, the Midwestern brewery has also discovered that a whole company can become frozen in its tracks because of inaccessible and lost e-mail.

Before upgrading its IT infrastructure to its current setup of 12 Dell Inc. and Hewlett-Packard Co. servers, VMware Inc. virtualization software and a hosted e-mail service last year, Boulevard Brewing had relied on a single Microsoft Corp. Windows NT-based server to run its operation.

The single server proved inadequate in late 2005, when a hardware failure cut off access to Boulevard's e-mail system, causing the organization to lose two days of productivity.

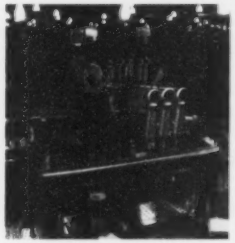
"We had people literally say, 'I can't work; I need to go home.' The company was shut down," said Tony Lux, purveyor of technology at the Kansas City, Mo.-based brewery. "When the server went down and e-mail went down, we were [helpless]."

Lux said e-mail was the company's primary vehicle for communicating with its 75 distributors and for booking tours of the brewery.

"It was down for two days, and it just killed us. There's no way we'll ever recover that [lost revenue]. You only have to go through that once to be taught a very big lesson," he said.

Lux acknowledged that the server and e-mail mishap was not related to budget issues — it was the result of a "lack of planning."

He said the company turned to MessageOne Inc.'s Email Management Services (EMS) hosted e-mail service this year.



Boulevard Brewing chose MessageOne's Email Management Services system to help protect its e-mail environment.

The EMS system promises to help manage the brewery's Microsoft Exchange e-mail environment and incorporate fail-over into the system in order to avoid a loss of access to e-mail, Lux said.

Once EMS is activated, Boulevard's domain name server begins assigning IP addresses to the e-mail accounts and instantly migrates everyone to a MessageOne secondary server housing 30 days' of users' e-mail and their contact information, Lux said.

Users can view their e-mail through a Web interface to the EMS system, he noted.

As more and more businesses shift toward using e-mail as a mechanism for processing orders rather than simply as a communication medium, unmanaged data stores and slow response times could prove to be more perilous than they once were, according to Mike Osterman, president of Black Diamond, Wash.-based Osterman Research Inc.

"The timeliness of e-mail delivery is becoming much more critical," said Osterman. If there's an outage, he said, "you may be unaware of [incoming] orders that are especially time-sensitive or from a very big client."

Lux said he has encountered only minor problems with EMS: He had to loosen the product's spam filter, and many users have complained about incessant e-mail notifications from MessageOne regarding virus captures. ▸

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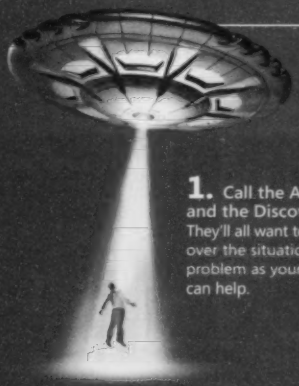
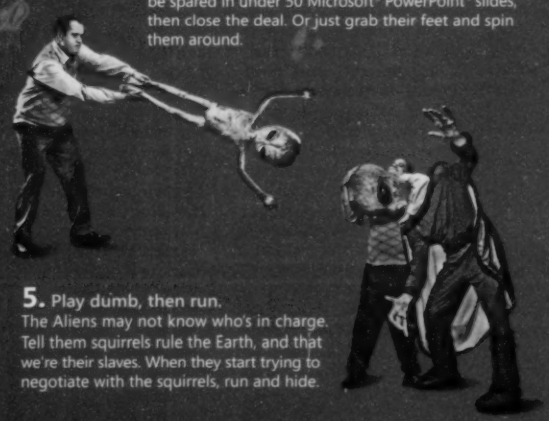


1. Call the Army, the Navy, and the Discovery Channel.
They'll all want to know. They may swoop in and take over the situation, but then it will be as much their problem as yours. They are experts and maybe they can help.

2. Steal the keys to their spaceship.
It sounds desperate but it just might work. When they realize they're stuck here they may mellow out and try to work it out instead.

3. Sneeze on them.
Aliens have different immune systems from our own. Which means even the common cold could be deadly. Cough in their direction, and spray when you talk — even if they are immune they'll be grossed out enough to leave anyway.

4. Try negotiating. (Or not.)
They may not come in peace, but they are advanced. Pitch them like a client; explain why humanity should be spared in under 50 Microsoft® PowerPoint® slides, then close the deal. Or just grab their feet and spin them around.



5. Play dumb, then run.
The Aliens may not know who's in charge. Tell them squirrels rule the Earth, and that we're their slaves. When they start trying to negotiate with the squirrels, run and hide.

taking on hackers. easier.

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BRIEFS

Former Oracle Exec Settles Fed Charges

A former Oracle Corp. vice president has agreed to settle federal charges and pay $198,000 for allegedly using insider information to gain stock market profits. Christopher Balkenhol had heard about Oracle's secret acquisition plans from his wife, who was executive assistant to Oracle's top three executives – CEO Larry Ellison and co-presidents Charles Phillips and Safra Catz – during 2004 and 2005.

SAP Buys Two Software Vendors

SAP AG has purchased two privately held Scandinavian software companies as part of a continuing effort to fill technology gaps in its product lines. SAP said it acquired Maxware AS, a Trondheim, Norway-based maker of identity management software, and Espoo, Finland-based Wicom Communications Ltd., which designs call center applications based on IP technology. Terms of the deals were not disclosed by SAP, which announced the acquisitions at its Sapphire user conference in Vienna.

Sun Licenses Chips To Arm Holdings

Sun Microsystems Inc. has licensed a suite of microprocessor patents to Arm Holdings PLC, a Cambridge, England-based maker of chips for mobile devices such as cell phones and handhelds. Sun said the pact marks the first time its Sparc chip multithreading technology has been licensed for use in mobile devices.

Verizon Unit Buys Security Firm

Verizon Business, a unit of Verizon Communications Inc., has agreed to purchase Cybertrust Inc., an information security services company, for an undisclosed price. Privately held Cybertrust employs 800 people in 30 locations worldwide, including its headquarters in Herndon, Va.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

Watch Your Driving Because...

... DriveCam is watching you. That could be the case if you're a trucker or a teenager. Faced with soaring fuel prices, transportation companies are looking to cut costs. One way is to reduce risky driving behavior that can lead to accidents, the costs of which self-insured trucking companies must pay directly. According to Doron Lurie, chief operating officer at San Diego-based DriveCam Inc., his company's Driver Risk Management Service, which starts this month for commercial operations, can "cut collision costs in half." Using wireless technology from Sierra Wireless Inc. in Richmond, British Columbia, the service every 20 seconds sends to DriveCam's data center video reports that capture risky driving activities such as gabbing on a cell phone or tailgating. The driver's behavior is analyzed by the company's proprietary software, then forwarded to human analysts. They collect the most egregious actions and send reports to the driver's headquarters along with recommendations for how a supervisor can use "a carrot-and-stick approach" to improve the driver's skills, notes Lurie. He adds that when there's an accident, the system immediately transmits video in real time. Saving lives and money by preventing accidents is the ultimate goal, says Lurie, pointing to a study by the Federal Motor Carrier Safety Administration that says the average cost to companies of a fatal accident involving one of their trucks is $3.4 million. The service starts at $600 per truck per year. In March, DriveCam began offering a similar service through American Family Insurance in Madison, Wis. The Teen Safe Driver Program lets parents keep an eye on kids who are on the road on their own.

$518B
Cost of traffic accidents worldwide in 2004, says World Report on Road Traffic Injury Prevention.

Splunk plunks chunks of ...

... system logs into timely dashboard reports. This week, Splunk Technology Inc. in San Francisco releases the beta of Splunk 3.0. The company's marketing vice president, Patrick McGovern (whose father owns the parent company of *Computerworld*), says the big problem with log files is that the data is unstructured and varies from system to system. Splunk, he claims, "puts structure on unstructured information." McGovern says Splunk 3.0 adds a dashboard that lets you collect log data in "time slices" so you can analyze it and pin down where and why problems occur on your network. He says the update has also improved Boolean and SQL search capabilities. Splunk 3.0 pricing, based on the amount of log data gathered daily, starts at about $2,500, though a free version can be downloaded.

500
Megabytes of log data Splunk lets you analyze daily with its free version.

SolarWinds scoops up ...

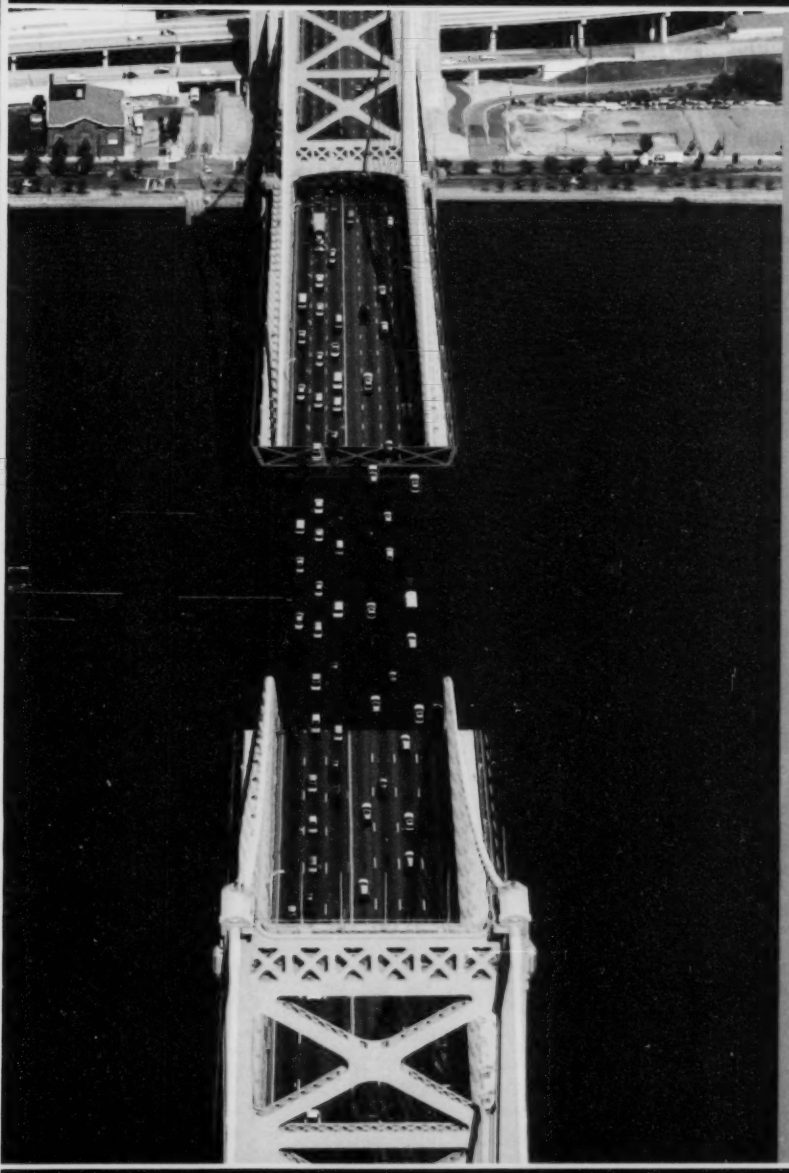
... Neon Software and releases tool updates. Austin-based SolarWinds Corp. will announce today that it has acquired Neon Software Inc. in Lafayette, Calif., for an undisclosed sum. Kenny Van Zant, chief product strategist, says SolarWinds will also unveil its $995 Engineer's Toolset 9.0 as well as Neon's 10.0 release of LANsurveyor for $1,495. The new version of Engineer's Toolset, which Van Zant characterizes as "a Swiss Army knife for network engineers," adds the NetFlow Real Time module, letting you analyze network traffic on Cisco routers by application, user or other parameters. Engineer's Toolset also now supports the Vista operating system, among other new features. Van Zant says LANsurveyor, a tool that literally draws maps of your network topology, now includes a continuous-scan function that charts any changes to that topology. And you can set it to filter out changes generated by laptops and other devices that scoot on and off the network. He says that over time, SolarWinds will provide some level of integration between the two products, but he opposes a full-scale merger of the software into a single framework such as Tivoli, OpenView or Unicenter. "The payoff for überplatforms is hard to get to," he says.

Software development 'beast' needs ...

... focused project management app. That's the assertion of Dave Churchville, CEO of ExtremePlanner Software Inc. in San Diego. And it's especially true for development teams using agile programming methods, he argues. Churchville says that most companies today depend on products like Microsoft Project, "which is fine for building a bridge or a building" but too task-oriented to be of much use to agile development programmers whose work "is a little fuzzier." He claims that his tool, ExtremePlanner 3.0, applies agile, or extreme, programming techniques to the project management process, such as letting users pick which parts of a project they want done first and letting developers, not managers, estimate deadlines. Churchville says it is also designed to support the "short time-box periods" of dialogue between end users and developers, ideally every two weeks or less. The next release of ExtremePlanner will include enhanced support for collaboration for distributed development teams. Pricing starts at $200 per user. ▸

Agile app dev is fuzzier than bridge building, according to CHURCHVILLE.

HOW TO EXPECT THE UNEXPECTED



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BRIEFS

Intel Settles Chinese Copyright Lawsuit

Intel Corp. has settled a copyright lawsuit it filed three years ago against Shenzhen Donjin Communication Technology Co. Intel sought $7.96 million in the lawsuit, which charged that the Shenzhen, China-based firm had infringed the copyright on its Intel Dialogic System Release 5.1.1 telephony software. Shenzhen Donjin countersued in 2005, alleging that Intel was operating as a monopoly. Terms of the settlement were not disclosed.

Oracle to Purchase Agile Software

Oracle Corp. has agreed to buy Agile Software Corp., a maker of product life-cycle management (PLM) software, for $495 million in cash. The acquisition is expected to close in July. Oracle President Charles Phillips said the Agile technology will be used as the foundation of a future Oracle PLM offering. Agile's products are sold primarily to the manufacturing, consumer goods, IT and life sciences industries.

IBM Unveils Tool For Building Forms

IBM has introduced a new Web application development tool that can help users who lack technical skills develop online forms for automating common manual tasks like collecting and analyzing information. The IBM Development Engagement Service, or DevEngage, is now available as a free hosted service on IBM's AlphaWorks site.

Alcatel-Lucent to Buy Network Firm

Alcatel-Lucent SA has agreed to buy NetDevices Inc., a maker of all-in-one network gateways for branch offices and small and midsize businesses. Terms of the deal, expected to close by midyear, were not disclosed. NetDevices employs 45 workers in Sunnyvale, Calif., and Bangalore, India. The company will be part of Alcatel-Lucent's enterprise business group.

Unisys Promises CMOS Production Beyond 2012

Won't force users to new Intel-based mainframes it rolled out last week

BY PATRICK THIBODEAU

UNISYS CORP. may be moving away from its mainframe CMOS chip, but company officials said last week that its users won't be forced to migrate to its new Intel-based systems.

The Blue Bell, Pa.-based vendor isn't setting a firm end date for its CMOS chip and promises to continue updating it "beyond 2012," said Rod Sapp, director of the Unisys enterprise systems and storage group.

The plans to continue producing the CMOS chips came at the same time that the company unveiled the first ClearPath mainframes based on Intel Corp.'s multicore Xeon processors.

No Forced March

Alan Lechtenberg, the technology manager with the infrastructure group at the University of Washington in Seattle, said he is pleased that Unisys isn't forcing customers to switch from its proprietary processor to the Intel chips.

"The option to not have to move is pretty important to us, but I think in the end we will want to," Lechtenberg said.

The university has three ClearPath mainframes running CMOS processors that support its critical Cobol applications, including financial and payroll software. Some of the applications date back to the 1970s, Lechtenberg said.

In the long term, he said, the ability to run the proprietary Unisys MCP operating system on a Xeon-based mainframe will make it easier to integrate the university's Cobol-based software with Windows and Linux applications. Such a configuration will also improve the performance and security of that integration, he added.

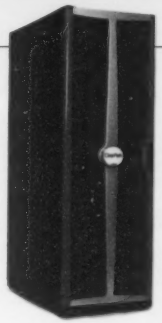
Meanwhile, Unisys unveiled two ClearPath Dorado 400 Series mainframes based on Intel dual-core Xeon 7100s. The new Dorado models, which are slated to start shipping in October, will run the Unisys OS 2200 operating system initially, the company said.

The vendor also introduced a ClearPath Libra Model 400 based on a quad-core Xeon 5300 chip. The new Libra model, which began shipping last week, can run both Windows and MCP simultaneously.

Sapp said that by 2010, all of the Unisys models based on Intel chips will support four operating systems — the two proprietary Unisys offerings, Windows and Linux — in virtualized environments.

Sapp noted that some of the larger OS 2200 users running transaction-intensive systems such as airline reservation applications may want to continue using the CMOS chip for a while.

However, he said he expects that the company's Intel-based systems will eventually meet the needs of most Unisys customers. Users will be able to move from the CMOS chip to Intel processors without recompiling, he noted.



The Unisys ClearPath Dorado Series mainframe will start shipping in October.

Gordon Haff, an analyst at Illuminata Inc. in Nashua, NH., said the move to an Intel-based platform for its hardware follows a shift by Unisys to focus more on its services offerings. "They couldn't afford to continue developing custom hardware for their mainframe installed base — it's a service company," he said.

The ClearPath Dorado 400 Series models are priced from about $200,000. Pricing options for the Libra Model 400 range from $32,000 to more than $200,000.

Continued from page 1

Texas

using an Oracle database and a Java-based registration management application from Hart InterCivic Inc., an Austin-based elections and records management software maker. The system runs on Solaris-based hardware from Sun Microsystems Inc.

A spokesman for Texas Secretary of State Roger Williams said TEAM was built to conform with a provision of the federal Help America Vote Act that requires states to create a centralized repository of eligible voters statewide.

About 30 counties continue to maintain separate local databases of voters instead of depending only on TEAM, the spokesman noted.

He also acknowledged that some problems occurred during the early voting process for the May 12 election, but he said most of them were resolved by Election Day.

"The database performed well on Election Day, and response time has improved dramatically," he contended. "We will continue to work to improve performance, but we feel the system is moving in the right direction."

An IBM spokesman said that "as with any new application deployment, work was required to optimize the solution based on actual usage patterns."

Persistant Problems

Nevertheless, four county officials this week contended that the TEAM system still has serious flaws.

"We're frustrated," said Candy Arth, the tax assessor-collector for Washington County. "Everyone has been."

Arth, who also is president of the Tax Assessor-Collector Association of Texas, said the process of entering names into the TEAM system can take minutes when it should take only "nanoseconds." Such delays force the county to pay its workers thousands of dollars in overtime, she said.

> **"Technology should improve our productivity, not create unnecessary additional burdens. This has been very hard. This is enough to get me thrown out of office."**
>
> **CHERYL JOHNSON,** GALVESTON COUNTY TAX ASSESSOR-COLLECTOR

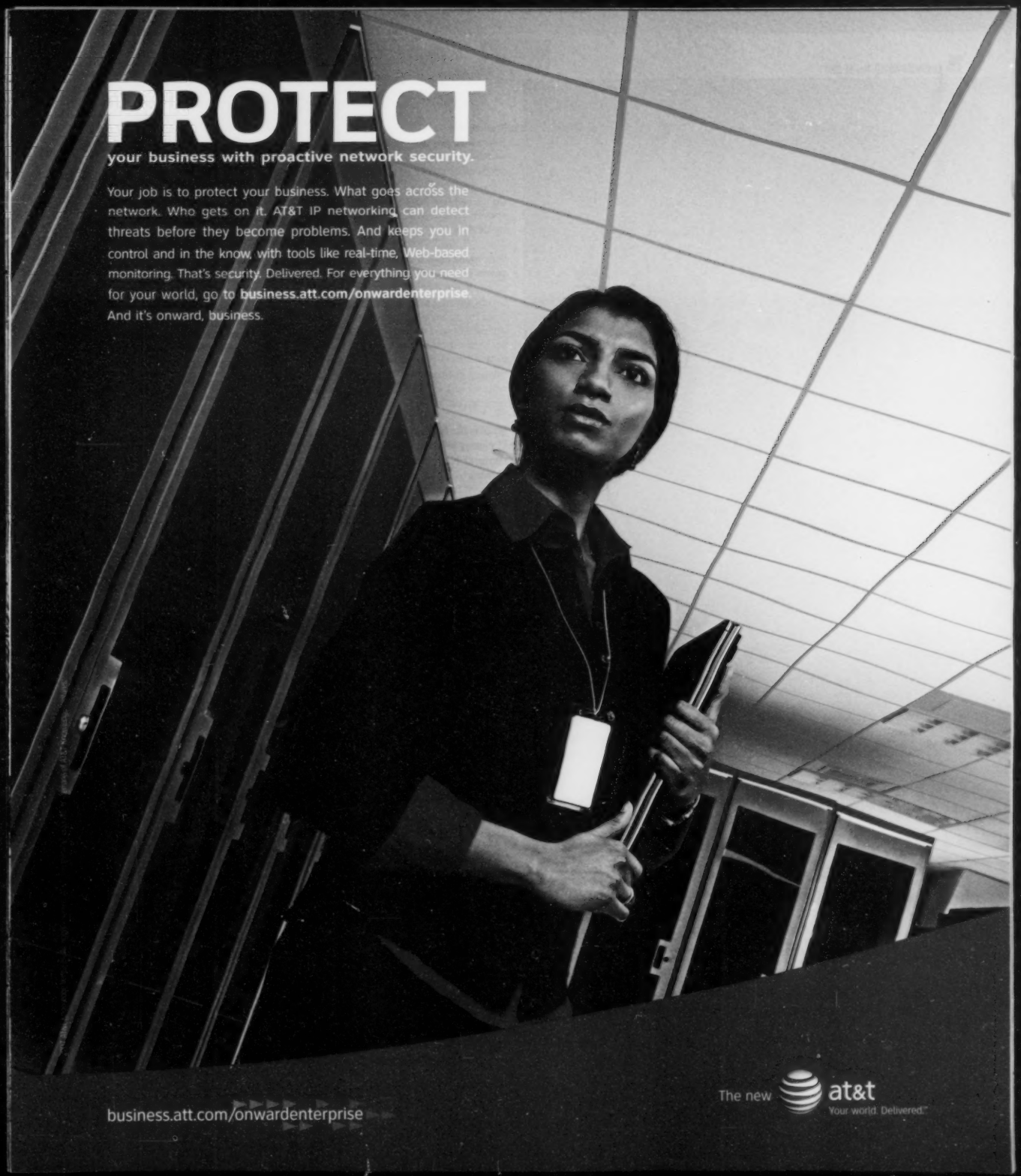
Paul Bettencourt, the tax assessor-collector for Harris County, which includes Houston, called for the state to conduct a comprehensive review of the system's performance.

Bettencourt said that the TEAM system rejected several eligible voters during the election, and those errors had to be resolved using local databases still in use in Harris County. "We don't need a system knocking people off randomly," he said.

"With its current performance, [the system is] unusable in a major county," Bettencourt added. In some cases, he said, Harris County has had to resubmit voter applications three or four times before they have been validated by the TEAM system.

Not all county officials were critical of the system.

Ro'Vin Garrett, Brazoria County's tax assessor-collector, reported that TEAM did "fine" there during the election. "There are some [performance] bugs," she said, "but when worked out, it will be a great system."


PROTECT
your business with proactive network security.
Your job is to protect your business. What goes across the network. Who gets on it. AT&T IP networking can detect threats before they become problems. And keeps you in control and in the know, with tools like real-time, Web-based monitoring. That's security. Delivered. For everything you need for your world, go to business.att.com/onwardenterprise. And it's onward, business.
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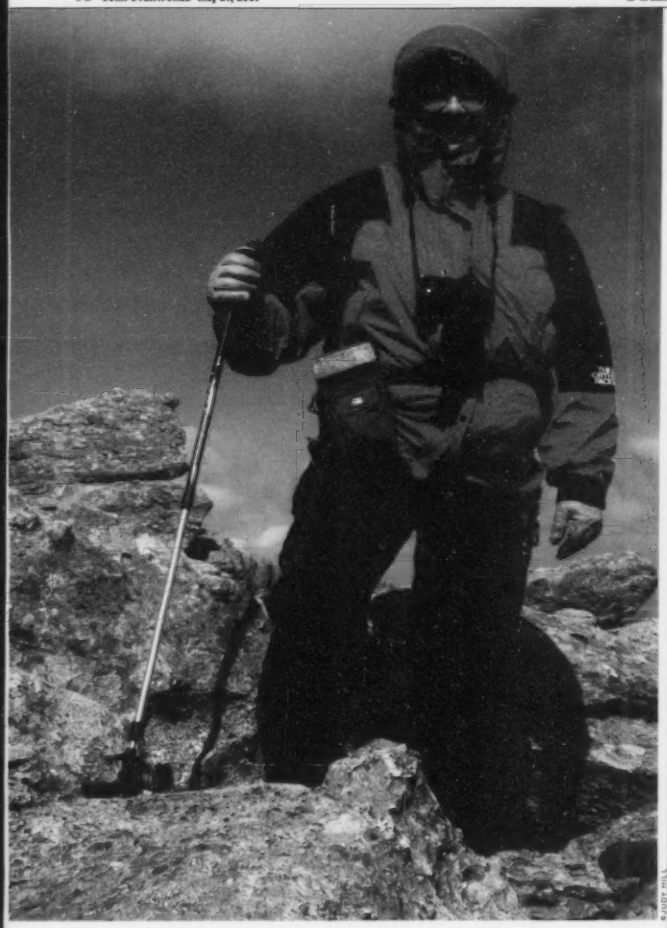

Amory B. Lovins

The Rocky Mountain Institute's **chairman and chief scientist** talks about **breaking out of stovepipes**, designing IT for efficiency, and **cooling data centers with slush.**

THE GRILL

How concerned should companies be about the energy efficiency of computers and data centers? Most big financial firms have $1 billion-plus IT capital budgets. Often, three quarters or more of that budget is not for the IT equipment but for support equipment such as power supply and cooling and air handling. Many data centers now pay more for electricity than for the IT hardware. These support assets and services are eating the IT budget, and yet most of them are wasted. By eliminating that waste, we could multiply severalfold the cost-effectiveness of the IT function.

How much is a watt of energy saved worth to a business? It's worth on the order of around $20 to $27 present value to get a watt out of the data center. So it's really a false economy to buy a server that looks cheap but costs more in electricity.

How much does it save upstream at the power plant? A kilowatt-hour of electricity from a coal-fired power plant burns about a pound of coal. That ends up as carbon dioxide and climate change. If you save a unit of electricity at the meter, you're saving roughly four times that much coal from being burned at the power plant. Saving 1 watt would, over 20 years, keep up to 2 tons of coal from being burned.

What is the biggest mistake regarding IT energy efficiency that you see in data centers? Not paying attention to designing your IT systems to be highly efficient in the first place. This comes about through stovepiped corporate functions. The people who make the IT strategy and set the requirements for the equipment and those who run the equipment and run the facilities have to be around the same table.

It is reinforced by a tendency to think of costs and for data center landlords to charge tenants in terms of square feet, whereas most of the costs are actually incurred by watts and not by area. That immature real-estate model causes densification that greatly complicates cooling and increases capital operating costs.

What change would give IT the biggest bang for the buck? Once you buy extremely efficient servers, if you're using conventional air-based cooling, at least meticulously implement hot and cold aisles. That will save half to three quarters of your cooling energy right off the bat, and it's very cheap to do.

In 2003, the Rocky Mountain Institute's data center design workshop developed recommendations to cut data center power needs by 89%. Are vendors implementing those recommendations? Many of the recommendations are starting to emerge, and some even better than we thought from vendors: the chip efficiency, early liquid-cooling systems, convectively cooled blades, superefficient power supplies, increasing experience with DC power supplies, and DC [power distribution], which is common in Japan.

But we don't see these things in data centers yet. We're seeing piecemeal hardware solutions coming along nicely. What is so far missing, at least in the U.S. data centers, is comprehensive integration of these concepts.

The next big step will be when one or more major operators puts all these parts together to realize the ninefold or greater savings that we outlined. In fact, I now think we can do even better, because both the IT and the support equipment are proving to be more efficient than we thought possible.

You advocate using, of all things, slush to cool data centers. Can you explain that? We recently did a design for a high-tech facility in a temperate climate that was originally going to have over 20,000 tons of chillers, and by the time we got through, the number was zero.

We found we could meet about 70% of the load with the coolness or dryness of the outside air using either air-side or water-side economizers, depending on the time of year. The rest [came from] a mountain of slush sprayed out of snow-making machines into a hole in the ground on a few cold nights and used to provide 32-degree Fahrenheit meltwater all year.

Wouldn't that take a lot of slush? In this

Continued on page 18

Dossier

Name: Amory B. Lovins

Title: Chairman and chief scientist

Organization: Rocky Mountain Institute Inc.

Favorite (nonwork) pastimes: Mountain and landscape photography. In the last two years, I switched from film to digital. It's saving silver. I'm merely inconveniencing electrons.

Role model: Besides my parents, Edwin Land, the founder of Polaroid, and David R. Brower, the greatest conservationist of the 20th century. I worked with both.

Philosophy: Try to help keep it simple, and keep learning.

Favorite vices: Procrastination. And dark chocolate.

Favorite technology: The combination of computers, the Internet and Google. As far as we know, there's nothing more powerful in the universe than 6 billion minds wrapping around a problem.

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GLOBAL DISPATCHES

An International IT News Digest

Norway Considers Supporting ODF

OSLO

THE NORWEGIAN government is considering a recommendation to make the Open Document Format (ODF) for Office Applications and the Portable Document Format (PDF) standard file formats for government documents.

Knut Lindelien, who headed a committee within the Oslo-based Norwegian Standards Association that suggested government agencies use ODF and PDF files, said the proposed mandate is likely to be approved.

If the recommendation is approved, use of Microsoft Corp.'s Office software would likely be slowly curtailed in the country, Lindelien noted.

The standards body spent six months studying several options and ultimately selected ODF and PDF because the formats are open and free, Lindelien said.

Norway joins France and Denmark in evaluating the open file formats, while Belgium has already adopted ODF.

Microsoft has suggested that Norway also support its new Office Open XML format, which the ECMA International standards body approved in December. If Open XML is accepted by other standards bodies, it could be recommended for use in that nation, Lindelien said.

■ JEREMY KIRK, IDG NEWS SERVICE

GLOBAL FACT

270k

Number of WiMax subscribers in 16 Asia-Pacific countries in 2006. The total is expected to mushroom to 31.4 million by 2012.

SOURCE: IN-STAT, SCOTTSDALE, ARIZ.

Laptop With Private Data Sold on eBay

SOUTHEND-ON-SEA, ENGLAND

THE BOROUGH COUNCIL in this city on the mouth of the River Thames is reviewing its security procedures after a laptop computer containing social services case notes on local children turned up on eBay Inc.'s auction Web site.

The council disposes of used computers through Revitalise, a not-for-profit organization in Essex, England, that reconditions used equipment for resale to schools and volunteer groups.

A council spokesman said the buyer did not notify the council of the missing laptop.

The laptop's data held foster care, adoption and child protection information dated between 1999 and 2003, the council said.

The laptop has been turned over to local law enforcement officials, noted the council.

Paul Greenhalgh, the council's corporate director of children and learning, said the council is "in dialogue" with Revitalise officials to find out what happened to the laptop.

"We are working with the police and have conducted a full investigation and review of our IT disposal procedure," he said.

■ TASH SHIFRIN, COMPUTERWORLD U.K.

EU Official Says Pact On Airline Data Is Near

BRUSSELS

EUROPEAN COMMISSIONER for Justice and Home Affairs Franco Frattini last week said he is confident the European Union and the U.S. can reach an agreement on how to handle personal information about European citizens flying to the U.S.

The airlines are currently operating under an interim pact signed last October that was intended to bridge the gap between strict European data-protection laws and U.S. antiterrorism intelligence-gathering efforts.

Many European lawmakers remain bitterly opposed to U.S. requests that some 34 facts be provided about each passenger flying between Europe and the U.S., including credit card data and information about how and where a plane ticket was purchased.

Nonetheless, Frattini said he is "confident we'll get a final solution." The European Commission is working with U.S. officials to determine "the length of procedures, the length of data retention times and other technicalities," he said.

■ PAUL MELLER, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Cisco Systems Inc. has chosen Ross Fowler, its Australia/New Zealand vice president, to head its service provider business in Europe. In his new post, which he will assume on Aug. 1, Fowler will be responsible for Cisco's relationships with European cable, mobile and telecommunications providers.

■ NADIA CAMERON, COMPUTERWORLD AUSTRALIA

Barclays PLC has announced plans to cut 1,100 jobs, including IT support staff and payment-processing personnel, as part of a reorganization that includes a review of its IT systems. A spokesman said the layoffs are unrelated to the bank's €67 billion ($91 billion U.S.) bid to acquire ABN Amro Holding NV. That merger would involve laying off 12,000 workers and moving 10,800 jobs to India, Barclays has said.

■ TASH SHIFRIN, COMPUTERWORLD U.K.

NTT DoCoMo Inc. said it plans to invest $10 million in a new venture fund established by Beijing-based Gobi Partners Inc. that targets start-ups working on technology for the convergence of telecommunications, traditional media and digital media. Tokyo-based NTT DoCoMo helped Gobi establish its first fund with a $10 million investment in 2003.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Continued from page 16

case, it was acres. But that's to replace over 20,000 tons of chillers. You get over 100 units of cooling per unit of electricity this way, and you need only about 500 subfreezing hours a year [to make the slush]. It's a highly reliable technology [but] obviously not suitable for urban sites.

The most interesting way to do this would be to [generate] power on-site as well and run your cooling off the waste heat of the on-site power plant. And if that [power plant] is also a fuel cell, which is the most reliable power source we know, then you would get rid of your uninterruptible power supplies and all of the costs and losses.

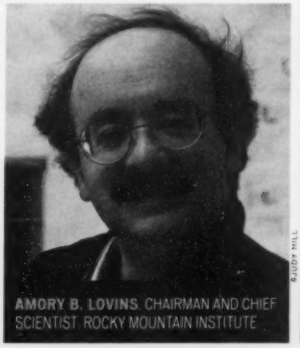
In computer rooms, air-cooling system fans take up a significant amount of power. You have proposed redesigning fans based on designs found in nature, such as the Fibonacci spiral. Why are such designs more efficient, and if they are, why aren't engineers designing them into products? Because they have less friction. Friction is by definition waste. Engineers for millennia have been designing out friction, but in the last century or so, our engineering got specialized and stovepiped.

THE GRILL

The design process that used to optimize a whole system for multiple benefits got sliced into pieces, each with one specialist designing one component or optimizing a component for single benefits.

When the integration was lost, when the design process got disintegrated, we were less able to see how an integrated design could eliminate noticeable losses.

Moreover, our engineers started getting paid for what they spent rather than what they saved, because their fee is traditionally negotiated downward from some percentage of the cost of what they design. So they have a perverse incentive to put in more equipment and energy and no reward for designing smarter.



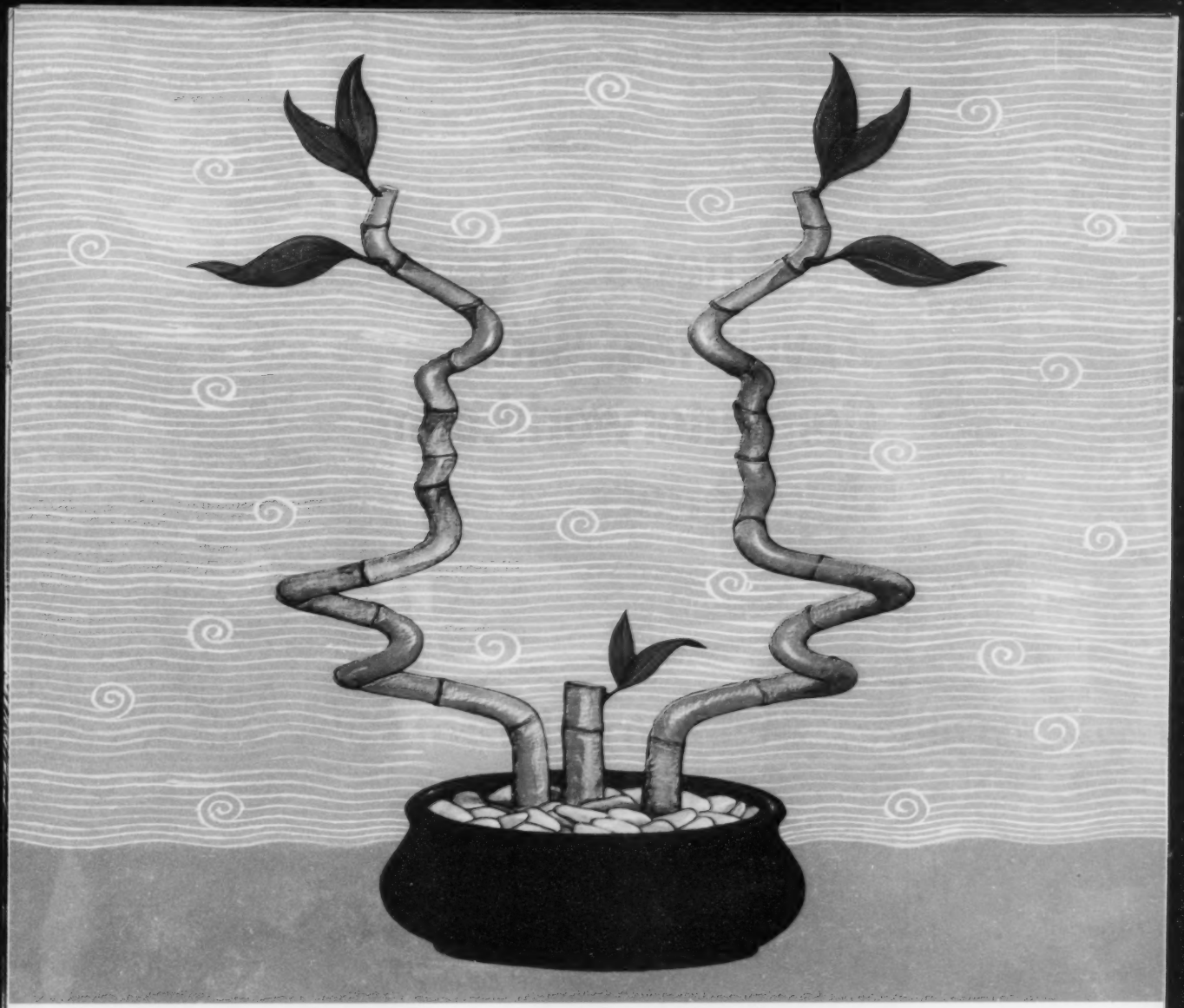
AMORY B. LOVINS, CHAIRMAN AND CHIEF SCIENTIST, ROCKY MOUNTAIN INSTITUTE

BUDDY HILL

What's the bottom-line benefit to data centers if all of these changes come to pass? A superefficient data center will have a lower capital cost because so much of the power and cooling equipment will go away. We'll get back to being able to spend most of our capital budget on the IT equipment rather than on the stuff to make it run.

Where can readers learn more? If people would like a general introduction to this way of thinking, they'll find quite a few examples in a book called *Natural Capitalism* [Back Bay Books, 2000]. Both that and a *Harvard Business Review* summary of it are free at Natcap.org.

– INTERVIEW BY ROBERT L. MITCHELL



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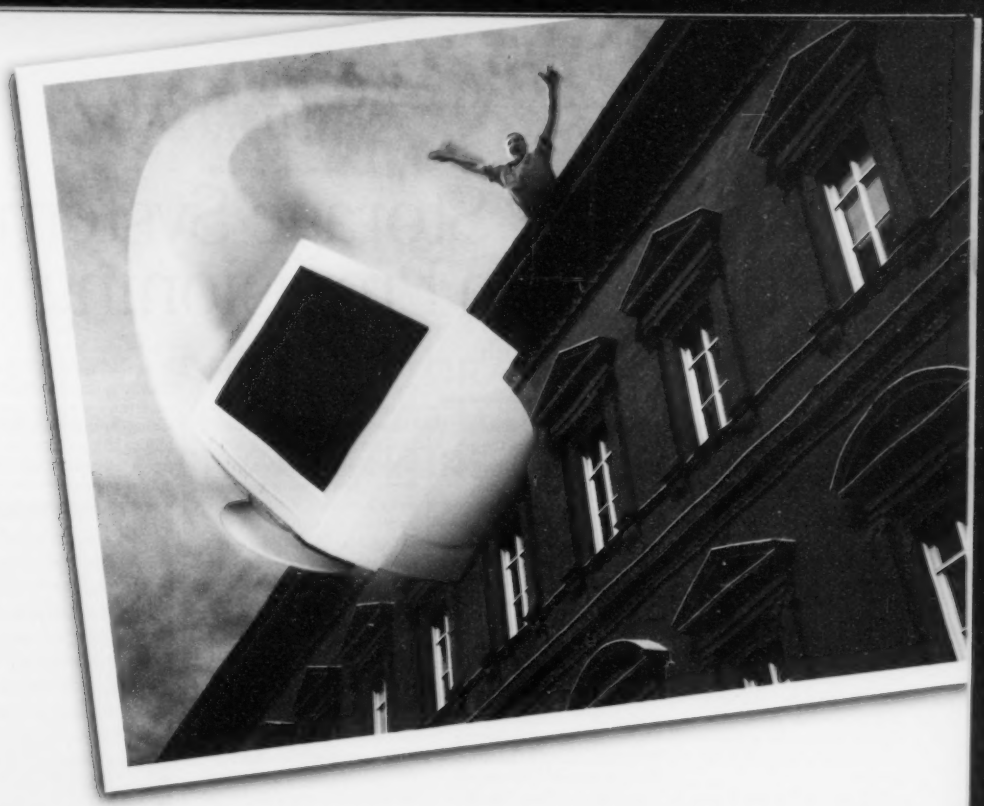

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COMPUTERWORLD

SHARK BAIT

Cast your tech tidbits into the feeding frenzy

Hitachi USP Storage System Includes Thin Provisioning

USP targets large corporations with upgraded virtualization services

BY BRIAN FONSECA

HITACHI DATA Systems Corp. last week introduced a new version of its Universal Storage Platform (USP) storage system with new thin-provisioning capabilities that the company said can help users maximize storage allocation and reduce storage consumption.

The thin-provisioning features are part of a new virtualization services layer in the storage system, said Hitachi Data Systems, a Santa Clara, Calif.-based subsidiary of Hitachi Ltd.

Called USP V, the new version has a 4Gbit/sec. Fibre Channel switch that could prove invaluable to United Air Lines Inc., said Gary Pilafas, managing director of the enterprise architecture team at the Chicago-based airline.

United has been testing one USP V system for about three weeks, Pilafas noted.

The company runs 10 older TagmaStore USPs in three data centers — two in Chicago for business resumption and another in San Francisco for what Pilafas calls the airline's "maintenance base."

The USPs support a variety of critical IT requirements at United, including the backup of servers running the airline's booking and pricing engines, according to Pilafas. The thin-provisioning feature in the new model will allow United to more efficiently allocate storage across the USPs, he said.

Pilafas said he expects that one of the new USP V systems will be able to manage United's massively parallel IBM data warehouse — which holds "a pinch" under a petabyte of data — while pumping more business intelligence back into the airline.

The warehouse often gets more than 100,000 requests for data at a time, he said, and users expect a response time of about 7 milliseconds.

United's overall data storage requirements are currently increasing by 30% to 40% a year, he noted, putting heavy pressure on storage allocation processes.

"Storage architects have become illusionists. Our field has become comparable to David Copperfield; you basically show people more of something that's not really there," Pilafas remarked.

He said he believes that Hitachi is leapfrogging other large storage vendors by providing the virtualization capabilities large companies need rather than investing limited dollars in products aimed at small and midsize businesses.

> **"Storage architects have become illusionists. Our field has become comparable to David Copperfield; you basically show people more of something that's not really there.**
>
> GARY PILAFAS, MANAGING DIRECTOR, ENTERPRISE ARCHITECTURE TEAM, UNITED AIR LINES INC.

The new Dynamic Provisioning software in USP V will enable users to allocate virtual disk storage based on anticipated needs without having to dedicate or designate physical disk storage.

Hu Yoshida, vice president and chief technology officer at HDS, said the Dynamic Provisioning software should also improve storage utilization by taking advantage of allocated but unused storage capacity.

Because Hitachi's storage virtualization occurs within the storage controller, the USP V platform can more easily scale and support critical common storage services, said Carl Greiner, an analyst at Ovum Inc. in Boston.

"[Hitachi] can put other people's storage on the USP V and give them common management capabilities. That's really powerful," said Greiner.

However, he noted that Hitachi will have to add a focus on midsize companies to convince distributors like Sun Microsystems Inc. and Hewlett-Packard Co. of the technology's true value. ▸

Raikes Explains Microsoft's Integrated BI Plans

BY HEATHER HAVENSTEIN
SEATTLE

In a keynote address at the first Microsoft Business Intelligence Conference here earlier this month, **Jeff Raikes**, *president of Microsoft Corp.'s business division, said the explosion of data produced by businesses points to the need for business intelligence (BI) tools. Such tools can help executives interpret data and make decisions that align with overarching strategic goals, he said. In an interview with* Computerworld *at the show, Raikes talked about the company's PerformancePoint Server 2007, which is set to ship this summer, and about Microsoft's purchase of SoftArtisans Inc.'s report-authoring tool.*

Microsoft announced the acquisition of SoftArtisans' OfficeWriter tool during the conference. Can you provide more details about that acquisition and how the tool can help IT shops struggling with report request backlogs?

People want access to BI from within the context of the Office tool they use every day. It was a natural for us to want to use the [SoftArtisans] technology as part of opening up reporting to Word and Excel. [Users] can consume reports from within Word and Excel. Those become an endpoint for [having] access to the information.

There have been 6,000 downloads of the Community Technology Preview version of PerformancePoint Server 2007. What types of companies are testing it, and what are they looking for in a performance management tool?

It is really varied. For example, one of the companies we will showcase here is Premier Bankcard. They have an explosion of digital information they want to get access to. It is the hundreds of thousands of calls they receive each day. They want to manage their performance of handling those calls.

You have the integration of BI into the Office tools, and that was really enhanced with Office 2007, where Excel could have live access to data cubes. What completes the end-to-end solution is the ability to do traditional BI applications like performance management, forecasting, planning and reporting — but in the context of your Office tools.

How do you respond to users who complain that they can't figure out how to set up key performance indicators or how to make performance management relevant to their processes, and to the fact that few workers use dashboards?

You can use SharePoint to have a comprehensive scorecard that then drills down into the information. We've made that easier [in PerformancePoint 2007] for average human beings to be able to set those capabilities up.

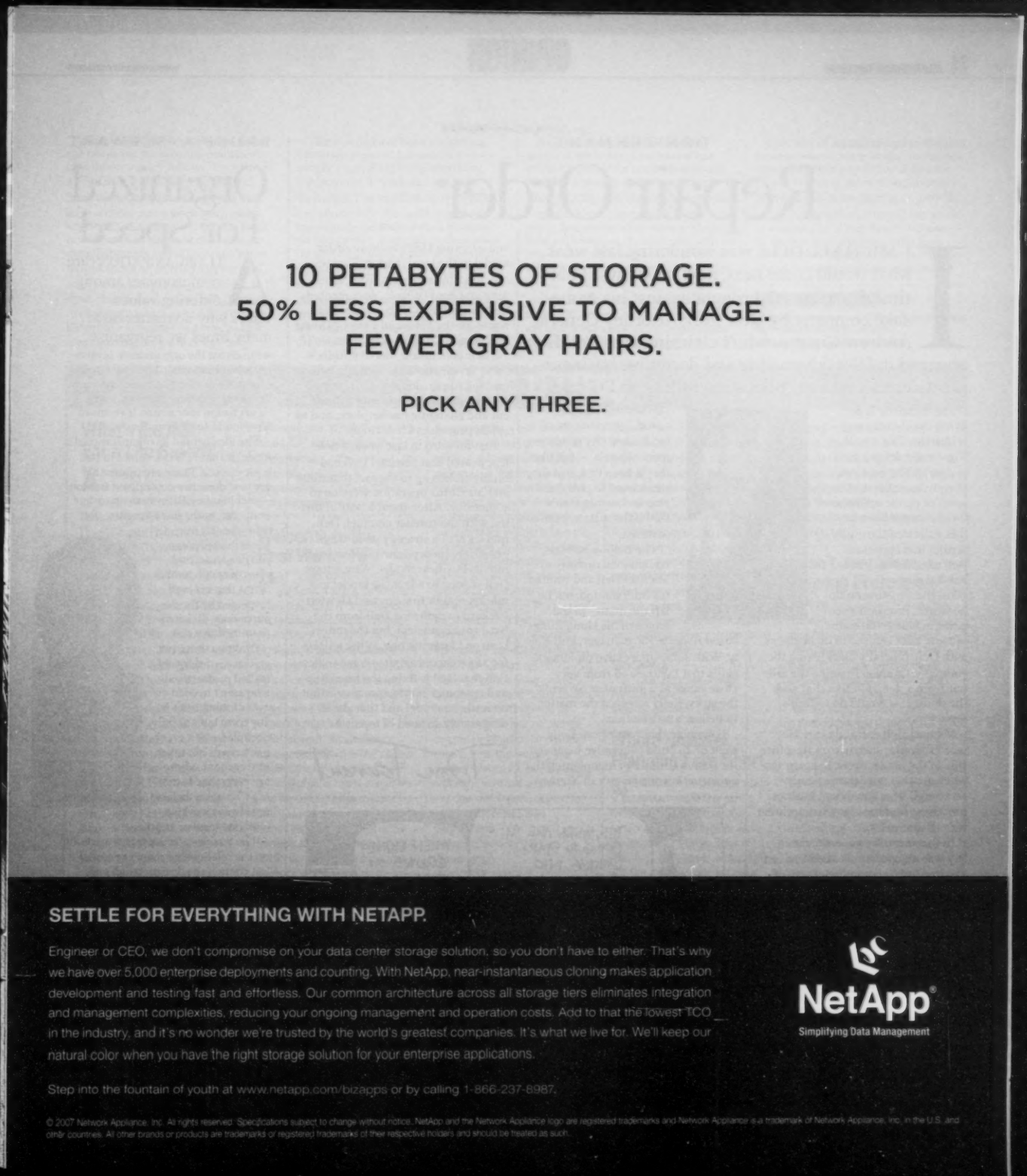
What is your take on ERP companies like SAP and Oracle claiming that they have an advantage in the BI business because their acquired tools have better access to back-office data that comes from their own ERP systems?

What really matters is whether users get the capabilities they need. Acquiring the traditional industry players in BI just gives you the same capability characteristic of the old industry. It makes those acquisitions suspect. Much more of our focus has been in how we transform the industry. Historically, you have had the pure BI players and the enterprise application vendors dabbling in BI. Our approach is much more about an end-to-end focus on BI, starting with the platform, including the integration with the Office tools and the business performance applications.

In that case, the competitive context is, do we show customers they can get the BI capability they need [and] get BI to more people at a lower cost and with a higher return? Our bet is yes.

Microsoft talked a lot today about the next version of SQL Server. What's on the horizon for Microsoft BI applications, and what can users expect next?

The key thing is what we are doing with PerformancePoint 2007. ▸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DON TENNANT

Repair Order

IF MICHAEL DELL was wondering last week what would come next, now he knows. This time, it's a lawsuit brought against his namesake company by New York Attorney General Andrew Cuomo, who's claiming that Dell Inc. engaged in false advertising and deceptive business practices as a means of boosting profits on PC sales.

DON TENNANT is editor in chief of *Computerworld*. Contact him at don_tennant@computerworld.com.

The company is denying the charges and is insisting that it will "vigorously defend itself in court." The problem, of course, is that in the court of public opinion, these charges have further validated the guilty verdict that countless Dell users have already handed down.

Yet the situation could be worse. Envision a scenario in which the state of New York refused to do business with Dell, officially blacklisting the company. Can you imagine the fallout from a decision like that and the damage it would do to Dell's reputation?

Michael Dell certainly can. He faced a similar scenario on the other side of the planet about 10 years ago, when another government entity accused Dell of fraudulent business practices. And the blacklisting threat was all too real.

In that case, the government entity was an operation called Scriven Trading Ltd., a commercial arm of the Beijing municipal government that's now known as Beijing Holdings Ltd. It's a convoluted case in many respects, but what it boils down to is that the Chinese agreed to pay Dell $2.5 million for a batch of 4,000 PCs that were among the last 486-based machines that Dell manufactured, and that Dell was very eager to dispose of.

Within a few months, the Chinese began to experience extraordinarily high failure rates with the PCs due to a problem that was eventually traced to defective Quantum hard drives. Top Scriven officials — and, by extension, top Beijing city government officials — felt like they'd been had, and they threatened to pull the plug on business with Dell if the matter wasn't resolved.

The Beijing officials complained directly to Michael Dell and wanted his intervention, but he left the matter in the hands of his Hong Kong-based Asia-Pacific manager, Phil Kelly. With some impressive diplomatic skills that I witnessed from very close range as a journalist covering the story, Kelly resolved the matter to Beijing's satisfaction.

Following that resolution, Kelly went on to build a lucrative business for Dell in China by championing the construction of a factory in Xiamen and adapting Dell's build-to-order model to the local market. Two respected China experts, Tom Manning and Paul DiPaola, documented Kelly's work in a 2005 article they wrote for the *Financial Times*, "Doing Business in China: Learn From Dell."

Their conclusion was that Kelly's success was rooted in a strategy that enabled him to adapt the direct business model to the reality of a different and changing marketplace, and to adjust processes accordingly.

Fast-forward to last week, when it appeared that Michael Dell had finally woken up to the fact that Kelly and his China operation were on to something. After about a year of flirting with the reseller channel, Dell told *CRN* of a strategy shift to aggressively incorporate indirect sales into its business model. Why it took Dell so long to adapt the model to a market reality that enabled Hewlett-Packard to dethrone Dell from the No. 1 spot is unclear, but the move is an encouraging one. What will be far more encouraging is some indication that Dell is fixing the financing and customer service processes that underlie its model and that are so desperately in need of repair. ▸

Don Tennant

BRUCE A. STEWART

Organized For Speed

ALL ORGANIZATIONS are compromises among differing values. That's why no matter how many times we reorganize, we find that the organization is missing something vital. Then we reorganize to solve that. But one company I've been watching for a few years hasn't had to reorganize; it seems to have found something that works.

The idea behind its organizational model is that IT work comes in two basic classes. There are things that are best done in a centralized fashion — keeping the ERP system up to date or operating the infrastructure, for example. But to really serve the business, you need a second class of small, nimble teams that are well respected by the departments, divisions or units they serve.

BRUCE A. STEWART is CEO of Vancouver, British Columbia-based Accendor Research Inc., an advisory services firm focused on management issues in the technology-enabled enterprise. He can be reached at bruce.stewart@accendor.com.

Bridging these two classes are groups of skilled professionals who aren't needed on a continuing basis by any team but are fully occupied when everyone's needs are taken into account. These are centralized staffers who nevertheless are always working with one team or another.

The business-facing teams are built on the relationship manager model but contain the design, build, test, deploy and refine capabilities needed to deliver IT services and products. These teams are augmented by personnel from the central staff — architects, DBAs and the like — as needed.

One key central service for this company is interface design — making sure all the company's systems follow a consistent and constantly improving set of practices, thus minimizing the impact of change. Sharing central staffers makes it easier to achieve the desired consistency. The business-facing teams are organizationally part of the central IT group but collocated with the business units.

What makes all this different from the norm are the ongoing practices that this company follows. Four times a year, an all-IT conference is held. Each of the remote units spends two days with its peers from other units and with the centralized group. They review each business area's latest accomplishments and direction. Presentations focus on sharing knowledge, with an outside presenter brought in to stoke the fires of change by bringing in external ideas. Lately, a few internal blogs have appeared as a way to keep ideas moving between conferences.

The results have been staggering. After two years of this model, there's simply no backlog left: Everything the business had wanted has been delivered. The small-team structure has allowed for the rapid interweaving of projects. Rather than working on one project at a time, staffers work on several at once, switching contexts regularly. Project managers brought in from the central project management office make this happen. In many cases, projects have been completed with less money and more quickly than the original business cases had projected.

Along the way, the relationship model at the heart of each team has made it possible for teams to question whether a project is even necessary. The quarterly conferences have created a competitive culture, with teams striving to deliver the most value with the least expenditure. It didn't take long for one of the teams to realize that improving existing systems — cleaning up interface "noise," resolving long-standing problems that users had learned to suffer in silence, and becoming helpful to the business in delivering information directly — adds value at very low cost.

This sort of organizational model isn't for everyone — but it works, and in this case it has built a lot of credibility for IT as a source of innovation. Given the premium CEOs are placing on growth through innovation, it may make sense to awaken the "living dead" — those IT staffers who are doing little more than conserving application knowledge — and do something new with them.

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READERS' LETTERS

What's the ROI For a Life Saved?

AS A regular reader, I was surprised by your unbalanced coverage of the Pricewaterhouse-Coopers report "The Economics of IT and Hospital Performance" in the April 2 article "Hospitals Are Slow to Gain Benefits From IT Spending." For people like me who spend most of their days in hospitals with clinical technologists, I find it difficult to understand why no clinicians were interviewed for the article. And why was there no mention that the study used data from 1999-2004? Since then, hospitals have made enormous IT strides.

The article focuses on the length of time necessary for ROI to accrue from health care technology implementations. But if health care IT leaders such as H. Stephen Lieber, president and CEO of the Healthcare Information and Management Systems Society, had been interviewed, things far more significant than ROI – including clinical quality increases and mortality rate decreases – would have led your coverage.

The No. 1 reason hospitals are deploying technology at a rapid rate is the positive impact that it has on the quality of patient care and safety. The article fails to include key results published in the study that align with what health care leaders are most concerned with today. For instance, the study clearly states that "the relationship between IT investment and operating expenses may be deepened by considering quality of care," and it plainly shows how mortality rates decreased as more IT investments were made. The answer to the question "What's the ROI for a saved life?" should be simple.

Craig Herrod
CEO and president, MedHost Inc., Addison, Texas, craig.herrod@medhost.com

Welcome to the Real World, HP

PAT THIBODEAU reported in the April 24 article "HP Offers New Approach to IT" that Hewlett-Packard believes "most IT managers are out of the loop on the really big strategic decisions made by their companies." He also reported that HP's senior vice president of marketing said that HP believes that "IT as we know it is really over."

I wonder if he really meant "IT as HP knows it." As almost any experienced CIO will tell HP's execs if asked, this new revelation by HP isn't new at all. Senior IT executives have been living in this upscaled "business technology" space for years. This pronouncement embarrassingly shines more negative light on HP being behind the curve than it does positive light on its new associated services.

Bruce Barnes
President, Bold Vision, Dublin, Ohio

Guns and the Net

IN THE ARTICLE "Va. Tech Killer Bought Magazines on eBay, Gun Online" [*Computerworld.com*, April 22], you discuss the online purchase of a handgun from a dealer in Wisconsin, which was picked up at a pawnshop in Roanoke, Va. You should make clear that in order for anyone to actually take delivery of a handgun, it has to go to a federally licensed dealer in his state of residence. At that time, he has to fill out and complete both federal and state forms and, in Virginia, undergo an instant background check by the state police in order to have the pistol released to him. While this background check is admittedly a bit limited, it would still check for criminal background and any other pertinent information. This is exactly the same process that he would have to go through if he bought the handgun from the local dealer rather than having it sent in from out of state. If you are going to make a broad statement like "bought online from a dealer in Wisconsin," at least have the decency to provide complete information on what that entails, rather than leaving your readers thinking you can buy a gun online and have it sent directly to you, thus sidestepping all the existing state and federal laws.

Gary L. Faeth
Deputy director of IT, Washington

Doubts About EHRs

IS THERE any compelling cost-benefit analysis in support of EHRs ["Health Insurer Offering Free Electronic Health Records to Doctors in Four States," *Computerworld.com*, April 23]? What might be called "evidence-based IT" would suggest otherwise. The expensive experiences of Kaiser Permanente and Britian's National Health Service in attempting to implement EHRs indicate that the managers of these vast organizations have not thought things through. There are less grandiose ways in which IT can deliver improved care and reduced costs now, such as bar-coding operating room instruments. Moreover, the rush to implement EHRs will result in incompatible systems that impede the very sharing of data that is supposed to be a key benefit. Making them compatible and maintaining them will indefinitely generate more unnecessary costs. If those are not enough reasons to withhold funding for EHRs, then the lack of adequate safeguards for privacy and personal identity should be.

Tom Shillock
President, M2 Consulting, Portland, Ore., tomsh@easystreet.com

Where Disaster Planning Falls Short

NORTHROP GRUMMAN would have been better served if it had put a true (enterprise) business continuity plan in place and implemented it ["On the Edge of Disaster," Strategies & Tactics, April 30]. Granted, there was not much that could be done to protect production, but employees should have been relocated, and the data center operations should have been transferred elsewhere, *before* the storm. Of course, putting a major center in harm's way without mitigating measures (placement on the upper floors of a hurricane-resistant building, for example) is questionable.

One telling statement in the article should be posted on every business executive's desk: "Disaster plans had been made in a vacuum, and managers found that they had a different order of precedence for restoring systems after a real disaster."

On the plus side, Northrop Grumman deserves a major "attaboy" for its assistance to its personnel.

John Glenn, MBCI
Business continuity planner, Norfolk, Va.

It Isn't Just Women Leaving Profession

OVER 10 years ago, I worked for a prestigious NASA center. The students in our intern program kept going back to school to change their majors to medicine, law or another engineering discipline ["Women Are Fleeing IT Jobs," *Computerworld.com*, April 19]. At my current position in local government IT, the mean, modal and median age of new hires is 40-plus, and for our application developers it's 50-plus. Many of our children and grandchildren are enjoying higher wages and lower stress working in construction, sales and even agriculture. I don't think the problem is just with not enough women entering the field, but not enough young people entering it.

Chris Connelly, CCP
Supervisor, application development, Pasadena, Calif., Chris_Connelly@email.msn.com

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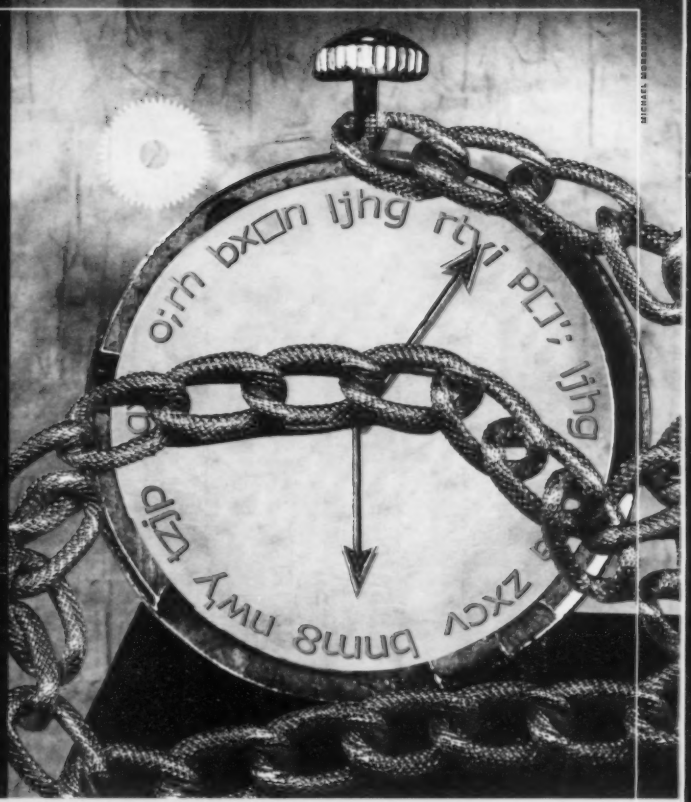
Encryption: It's Time

The need has never been greater, and the technology is ready. **By Gary Anthes**



ON THE SURFACE, encryption has always seemed a no-brainer. Why expose confidential information to prying eyes when you could protect it by scrambling it? But even though encryption technologies have been widely available for more than 10 years, they have been slow to catch on.

Things are starting to change, however. A succession of high-profile, high-pain mishaps — including stolen laptops, lost tapes and litigation associated with data breaches — has seized the attention of management, and not just IT management. Meanwhile, hardware and software vendors have whittled away at the traditional objections to encryption, including performance penalties and the difficulty of managing keys.

Now, companies that have a great deal of sensitive data are beginning to move beyond the tactical point products they might have used years ago to high-level encryption "platforms" that provide services to applications, databases and networks companywide.

"We are deploying an architecture that will give us the ability to manage encryption seamlessly across multiple operating systems and multiple backend systems and encrypt anything we deem sensitive," says Harvey Ewing, senior director of IT security at Accor North America. The encrypted data could be personally identifiable information, such as names, addresses, Social Security numbers or telephone numbers, or it could be medical or financial data that is subject to government regulations.

Accor, a Carrollton, Texas-based manager of economy lodging chains, including Red Roof Inn and Motel 6, uses Key Manager from RSA Security Inc. to centrally manage the encryption keys of its 1,300 properties. The product allows different applications to

Continued on page 30

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©2007 IBM Corporation. All rights reserved. Lotus Sametime 7.5 offers Voice over IP communications within the enterprise. Third-party offerings are available to integrate IP Telephony with Lotus Sametime.

_INFRASTRUCTURE LOG

_DAY 56: Our voice and data networks are out of control. Nothing's unified. Nothing's integrated. We have to use different devices for different things. Gil's had enough.

_He's welding every device in the office together with a blowtorch. He calls it "The Unifier."

_DAY 57: I found a better way: Unified Communications and Collaboration solutions from IBM. Now we can integrate our networks to give us real-time access on virtually any device. With the IBM Lotus® Sametime® 7.5 platform we get way more than IM. It combines IP Telephony, Web conferencing and more into a single interface. We're working fast and for less.

_Does this mean our office is no longer a hard-hat zone?

Lotus.

IBM.COM/**TAKEBACKCONTROL**/UNIFY

Continued from page 27

share encrypted data without the need for each one to have its own keys. "The key management server is the nerve center of all our encryption processes, and it takes the management of individual keys out of the picture," Ewing says.

Accor has short-circuited one of the major problems in encryption. Managing keys can be complex and risky, and it has been a major impediment to the broad rollout of cryptography. The difficulty arises because encryption comes into organizations "organically, not strategically," says Jon Oltsik, an analyst at Enterprise Strategy Group Inc. in Milford, Mass. "It's the piece that many people will get wrong over the next two to three years."

Oltsik predicts that hard drives, tape drives, new versions of database software and the like will eventually include encryption functions, and companies will bring them in one at a time. "Next thing you know, you've got five key management systems and all kinds of complexities," he says. "The biggest risk now is disaster recovery; either you'll have to recover five different key management systems to get a business process up or you'll do a good job of backing up four of them but lose the keys on the fifth and tank the whole process."

IT security manager Marc Massar says his company, which he asked not to be named, processes more than half of all card transactions around the world. He says the company has for many years protected its transactions with narrowly focused products that do specific things like encrypting the personal identification number in an ATM transaction. These products are geared toward protecting "data in motion," Massar says.

There are several ways to encrypt data in motion; options include Secure Sockets Layer (SSL) for the Internet and the IPsec standard for "tunneling" — establishing a secure tunnel in an otherwise nonsecure network. "These kinds of products are fairly well established, and they paved the way for e-commerce several years ago, especially SSL," Massar says. "Nobody would question the need to encrypt a credit card number across the Internet anymore."

It is much less common today for companies to encrypt "data at rest" — on servers, desktops, laptops and backup tapes. But protecting files and databases has recently become the focus of encryption projects at many companies. For example, Massar rolled out Ingrian Networks Inc.'s DataSecure Platform, a dedicated encryption appliance that sits between applications and databases. The hardware and software are specially tuned for computationally intense cryptographic processes.

Massar says he uses the Ingrian devices to apply one of the basic principles of encrypting data at rest. "Think of a piece of data as having a life cycle," he says. "I want to protect it as close to its point of origin as possible, so when it comes into my first system, I encrypt it then. Then if I want to funnel it into a back-office system, it stays encrypted, and if I need to back it up to tape, it's still encrypted.

"We are doing this first for our Internet-facing systems, because that's where the most risk is," Massar adds. But the goal is to have one encryption service, so application developers don't have to develop a new encryption routine every time they get a piece of sensitive information.

But Massar acknowledges that such comprehensive, seamless encryption is easier to imagine than to accomplish. He says he has more than 1,000 systems subject to the encryption guidelines of the Payment Card Industry Data Security Standard, and "that requires a lot of architectural decisions."

Organizations moving to encrypt their information at rest naturally look first at the most vulnerable data, which can exit the company in laptops, handheld devices and so on. A computer services firm recently set a policy that the hard drives on all laptops be encrypted using Whole Disk Encryption from PGP Corp. in Palo Alto, Calif., says Lawrence Hale, the firm's chief information security officer. He asked that his employer not be identified.

Companies often balk at encrypting large amounts of data because the mathematical algorithms used in encryption and decryption are computationally intensive. Hale says it can take six to eight hours to encrypt a 60GB to 80GB hard drive from scratch. But that's a one-time job for each drive. Once it's done, the day-to-day incremental encryption and decryption run in the background, unnoticed by users. "The files you bring up open very quickly," Hale notes.

Performance Perils

While Moore's Law has taken a lot of the sting out of encryption, Hale says a server that processes many transactions against a large database can become unacceptably slow if care isn't taken. The answer, he says, is not whole-disk encryption but selective encryption at the application or even data-element level. "We will encrypt Social Security [numbers], name, address — anything that is personally identifiable information," Hale says. In some cases, he says, it's possible to do that using the features embedded in commercial software, such as database applications.

But while going to that level of granularity saves processing cycles, it comes at cost: the effort required to inventory and classify applications and data. In fact, technology per se is not the hardest part of a broad encryption deployment, says Matt Haynes, a security architect at a major telecommunications firm that he declined to name. "The big effort is that you have to identify where the data is. It took us a quarter to do that. The second thing is figuring out policies and procedures: How do you live with this new thing called encryption?"

Haynes recommends tackling an encryption project with two distinct teams: "One to find and classify data, and the other to become experts on the encryption tools and processes themselves."

The work doesn't stop once encryption is in place. "There's process overhead, administrative overhead, and you obviously have to manage that system very closely," Haynes says.

And there's key management. "Once you've got a lot of data encrypted, you'd better damn well be sure you can get it decrypted and know who can get it decrypted," he says.

Still, there are technology choices that can greatly minimize the deployment effort, Haynes says. For example, some approaches to encryption require that applications be modified at each point where they access an encrypted database. "When we first started looking at encrypting data," Haynes recalls, "we understood that the need to make complicated and numerous application changes was going to turn the concept into a many-year, many-million-dollar project." But he was able to avoid such an undertaking by using the Ingrian encryption appliance. It sits between the database and the applications and is largely invisible to the applications. Application-level changes were "minimal," he says.

"Encryption is a strategic initiative," Massar says. "For the past year or so, we have been focused on some very tactical things — encrypting tapes, laptops, BlackBerries and so on. These are some quick-win situations. But what if I had taken a more strategic approach a couple of years ago?"

For example, if he had re-architected his applications so as not to store data in clients, then he might not have to encrypt the laptops. If the source Massar is backing up to tape had been encrypted to begin with, then he wouldn't need to encrypt the backup tapes. "Maybe if I had done a little work upfront," he says, "I wouldn't have to do these tactical things later on."

TOP FIVE REASONS COMPANIES ENCRYPT

Mitigate data breaches	66%
Comply with regulations	51%
Protect brand, reputation	40%
Avoid postbreach notification	13%
Honor privacy commitments	7%

Base: 768 U.S. IT and business managers; multiple responses allowed

SOURCE: PONEMON INSTITUTE LLC, FEBRUARY 2007

TOP FIVE REASONS COMPANIES DON'T ENCRYPT

Performance implications	64%
Cost	60%
Key-management concerns	37%
Implications for disaster recovery	36%
Effort required to modify applications	32%

Base: 227 North American IT security professionals; multiple responses allowed

SOURCE: ENTERPRISE STRATEGY GROUP INC., 2006

Encryption Gotchas

Companies rolling out encryption programs tend to focus on well-known difficulties, such as key management. But other surprises await the unwary.

■ **SEARCH:** Traditional search methods may not work on encrypted data, says Harvey Ewing, senior director of IT security at Accor North America. And to search a big database by decrypting every entry as you go is computationally infeasible. The answer: Use a special algorithm to, for example, create a unique hash value for each credit card number, and include that alongside the encrypted credit card number. The hash value can't be converted back into the credit card number if someone improperly gains access to it, but it can be searched on as easily as any other data element.

■ **DEPENDENCIES:** Make sure you aren't passing an encrypted data field from one system to another that is expecting to find it unencrypted. "Once you begin encrypting data in one location, if you don't know all the dependencies of where the data is stored and used, then you are going to break things," says Ewing.

■ **PERFORMANCE:** Despite the march of Moore's Law and the tuning and optimization of hardware and software by cryptography gear vendors, performance is still a concern. "We did hit some stumbling blocks in the way some of our databases interacted," Ewing says. "That can be a problem if you are at the front desk of a hotel swiping a credit card." (With technical help from the vendor, the performance problem proved "manageable," he says.)

– GARY ANTHES

HOW TO Build a Better Web Site

Follow these tips, and the world will beat a path to your URL.

BY MARY K. PRATT

THE INTERNET has brought a lot of business to MyIStop LLC, a Fort Scott, Kan., printing company. About half of its $20 million in annual revenue comes from Web traffic, says Michael Joseph, vice president of e-commerce.

Given those figures, MyIStop can't afford anything less than a top-notch site. And although it won a 2006 Web Marketing Association award for outstanding achievement in Web site development, its workers know that's not what drives business.

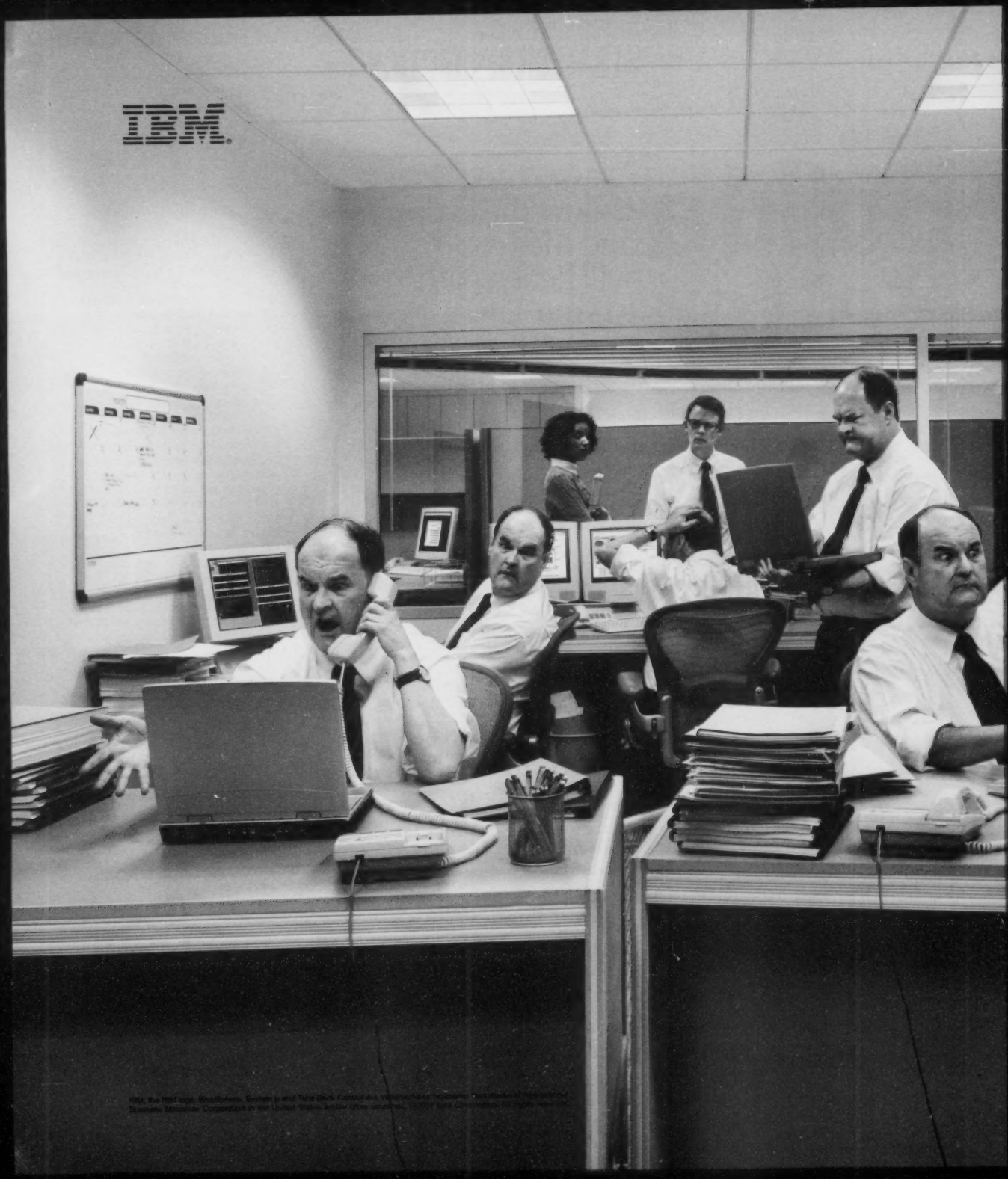
"The company that takes the best care of the customer is going to win, and e-commerce is not an exception to this rule," says senior programmer Mike Wulz.

But what does it take to deliver that kind of customer service in cyberspace? Here are 10 steps garnered from those who run and evaluate top corporate Web sites:

1 Build it for users.

Development needs to support what users want, not necessarily what the company wants to promote, says Kerry Bodine, an analyst at Forrester Research Inc. in Cambridge, Mass. "You design with your users in mind at every key decision point," she says.

Continued on page 34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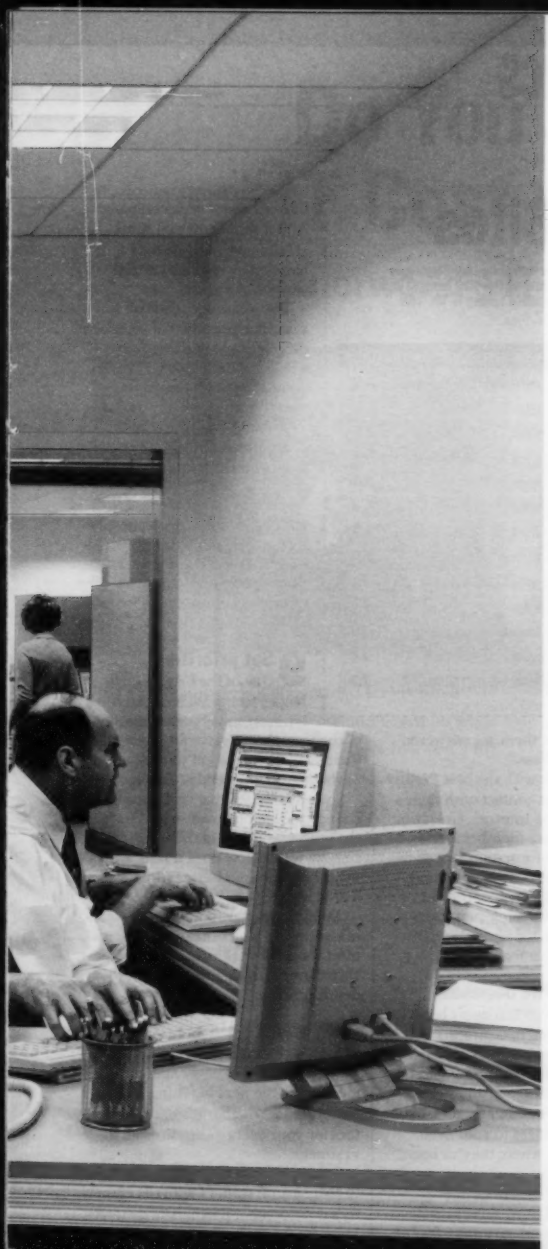

_INFRASTRUCTURE LOG

_DAY 74: This is too much. We're stuck dealing with multiple interfaces and apps. We can't find the relevant info we need. I feel like it takes six of us to do one person's job.

_Six Gils? Do I need to get every one of them to sign my expense report?

_DAY 76: I'm freeing everyone up with IBM WebSphere® Portal. It's the fastest and easiest way to integrate everything so we have seamless access to our information. Like Web 2.0 for the business environment, it gives each and every one of us a single, customizable interface. And running it on an IBM System p™ with virtualization technology saves us time and energy.

_Back to one Gil. There's so much less of him to love now.

WebSphere. Portal

IBM.COM/**TAKEBACKCONTROL**/INTEGRATION

Continued from page 31

It sounds simple, but it often requires a shift in thinking. "Developers are very focused on building the technology and not necessarily looking at whether it makes sense to the user," says Helen Galasso, vice president of interactive marketing at Coldwell Banker Real Estate Corp. in Parsippany, N.J. "I had a developer say, 'If [the users] can't figure out how to use it, then they shouldn't use it.' That's what you have to combat."

2 Listen to users.

Forrester has reviewed more than 200 Web sites and found that a mere 2% pass its usability tests. Companies could do better if they recruited actual users to test their sites, Bodine says. "You want to see where they stumble, what they're confused by," she adds, noting that the companies with the highest-ranked sites run usability tests frequently.

3 Make information easy to find.

Users want a Web site they can easily navigate, says Jeff Sluder, digital brand manager for PG.com, the Web site for The Procter & Gamble Co. in Cincinnati. "Site visitors are frustrated when they land on a page, realize it is not what they thought it would be and have to use the Back button and try again. Usually, they will simply leave and go on to the next site on their search engine's list," he says.

The Web team at Merrill Lynch agrees. It designed its site to remember the page each customer uses when visiting ML.com. "They're often trying to log onto one of the smaller sites, such as ML Direct," says Joseph Infozino, director of Merrill Lynch corporate technology. "So the first time, they go to ML.com, but the next time, we remember to bring them right there to save them a click."

4 Accommodate all users.

The average age of people filling prescriptions on Medco.com is 54, and 20% of those individuals are over the age of 65, says Tom Feitel, chief Web officer at Medco Health Solutions Inc., a pharmacy benefits management company in Franklin Lakes, N.J.

To empower people with vision problems or other disabilities, Medco designed an accessible Web site. For example, it eliminated drop-down menus, which can be challenging for those whose hands shake. It expanded the size of certain images and changed the color palette and font sizes to make the site easier to navigate and read.

Web administrators should also make sure that their sites can be used on computers of varying capabilities and with a range of connection speeds, says Terry Golesworthy, president of The Customer Respect Group Inc., an Ipswich, Mass.-based research and consulting firm that focuses on how corporations treat their online customers.

5 Be responsive.

Coldwell Banker developed a program called Lead Router to ensure that its real estate agents don't miss any potential leads generated online, says Charlie Young, senior vice president of marketing. The tool converts online inquiries into text messages that are sent to agents' cell phones within 10 seconds. "Not only are we able to answer virtually all of our leads," Young says, "but most of them get answered in eight hours or less."

The companies with the best Web sites don't restrict contact with their online users to the Internet, Golesworthy says. They post their brick-and-mortar contact information as well as e-mail addresses. They have formal systems for handling incoming messages, thus guaranteeing customers a response, and the top sites also have instant, online chat features.

6 Show up the Joneses.

Too many Web managers base success on internal measurements, such as how many hits they get on their sites. Instead, measure your site against those in your peer group and top sites from companies in other sectors. "Your customers' responses to your Web site are based on where they've been," Golesworthy says.

7 Build trust.

Most consumers no longer fear doing business online, but they still need to be convinced about security. "That's a biggie, particularly in the consumer sites," Golesworthy says. "People have read about identify theft, privacy issues and spam."

The best sites clearly explain their security, privacy and marketing policies right upfront.

8 Assign ownership, but work as a team.

"You have to think of the Web site as being the primary way people find out about your company. And if that's how you think about it, why should it be handled by the tech people?" Golesworthy says.

Two years ago, Esteban Borrero, vice president of solutions delivery at McKesson Corp., a health care services and IT company in San Francisco, passed responsibility for the Web site over to corporate communications. "For me, it was clear that communications does a much better job at that," he says, noting that they're the experts in reaching the doctors, pharmacists, vendors and consumers who use the site. But Borrero maintains a collaborative relationship between IT and corporate communications.

9 Set priorities.

One of the biggest challenges facing Web site administrators today is the volume of requests they receive for changes to their sites. "You can get requests from anybody and everybody," Galasso says.

So don't blindly gear up for every change request. Instead, ask: What is the purpose of this? Is this what consumers want? How does it rank with my other requests? Better still, develop a process.

At MyIStop, stakeholders from sales, marketing, IT and other departments meet weekly to prioritize Web projects, says Gina Sullivan, director of software development.

10 Watch for the next big thing.

A great Web site is never static. But identifying the next big thing — and determining whether it's the right tool for your users — requires an investment.

Coldwell Banker is developing a plan to pair several staffers with the company's development partners to generate ideas for future implementation. Time-to-market for online tools now ranges from three to 18 months, Young says, and he hopes to cut that by 25% to 50%.

"There are always ways to improve the Web site," Galasso says. "People are finding new and better ways to use it. So we have to make sure we're always where the consumer is — or ahead of them."

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

Super Sites

Here are the best Web sites as ranked by Customer Respect Group's 2006 review of the 100 largest U.S. companies. The highest possible rating is 10. The average for all sites was 5.7.

COMPANY	WEB SITE ADDRESS	RATING
Intel Corp.	www.intel.com	7.9
Sears Roebuck and Co.	www.sears.com	7.9
Hewlett-Packard Co.	www.hp.com	7.6
Medco Health Solutions	www.medcohealth.com	7.6
Procter & Gamble Co.	www.pg.com	7.6
Johnson & Johnson	www.jnj.com	7.4
IBM	www.ibm.com	7.3
Pfizer Inc.	www.pfizer.com	7.3
Bank of America Corp.	www.bankofamerica.com	7.1
CVS Corp.	www.cvs.com	7.1
McKesson Corp.	www.mckesson.com	7.1
Microsoft Corp.	www.microsoft.com	7.1
Wal-Mart Stores Inc.	www.walmart.com	7.1

Three Common Design Flaws

Those who build and review top-of-the-line Web sites note five common design flaws. Here are the five big "don'ts" of Web site design:

DON'T IGNORE SEARCH. About half of users rely on the search function to get around a site and to locate the information they want. If your online search function isn't sophisticated, you'll frustrate those users and lose them.

DON'T BURY INFORMATION. People don't want to navigate, even if navigation is easy; they want to find the information they seek.

DON'T PROVIDE TOO MUCH. Irrelevant information and marketing materials turn customers off. Give them what they want and clear out the rest. Keep the site up to date.

DON'T FORGET LOW-BANDWIDTH CUSTOMERS. Your site shouldn't be too hard for use by the 25% of computer users who still have dial-up Internet access.

DON'T USE JUST TEXT. Incorporate video and other graphic elements to deliver your message.

– MARY K. PRATT

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9:00am to 9:40am	**IT Infrastructure for the Agile Enterprise** Michael Hugos, Computerworld Columnist, CIO at Large and Author of *CIO Best Practices: Enabling Strategic Value with Information Technology* and *The Greatest Innovation Since the Assembly Line*
9:40am to 10:20am	**Case Study: Bank of America** Srini Mannava, Senior Vice President, Bank of America
10:20am to 10:35am	**Refreshment and Networking Break**
10:35am to 11:15am	**Enabling a Dynamic IT Infrastructure** Joe Strada, Director, Oracle
11:15am to Noon	**Moderated Panel Discussion** Moderator: Ron Milton, Executive Vice President, Computerworld Panelists: Michael Hugos, Computerworld Columnist, CIO at Large and Author; Srini Mannava, Senior Vice President, Bank of America; Joe Strada, Director, Oracle; Ed Franklin, Senior Director, Fujitsu Computer Systems; Ron Long, Global Partner Manager, Network Appliance

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Flood of Virus Alerts Is a Test of Processes

Incident response has been a low priority at the agency, but an infestation by a Trojan horse is a real-world chance to see how well the system works. By C.J. Kelly

SECURITY MANAGER'S JOURNAL

I WAS WORKING late the other night, trying to clean up some loose ends, when virus alerts filled my e-mail in-box.

The volume of alerts caught my attention. We run a tight ship when it comes to virus protection. Desktops and servers are continually updated. If you were to audit any system at any time of day, you would find it to have the latest virus identity files. Anytime I mouse over the antivirus icon on my screen, I can see that my system automatically checked for updates no more than three minutes earlier.

It's unusual for us to receive even a handful of alerts on any given day. In fact, one or two is the normal volume for an entire workweek. We haven't had a virus outbreak in the two and a half years that I have been here.

But why would a manager want to be bothered by virus alerts? Well, I'm not bothered by them normally; it's only when I see a lot of alerts that I get bothered. If it's just the onesies-twosies, I don't pay much attention; staffers can take care of that. But I want to know when we start getting a raft of alerts. Malicious code can travel quickly through a network.

My need to be in the loop was instilled in me when I held a previous management position almost nine years ago. That job kept me busy enough that it was unusual for me to go to lunch. Naturally, the day I did go out was the day our company's data was wiped out by a malicious Trojan horse. A staffer had visited an inappropriate Web site and inadvertently downloaded the Trojan. Since the staffer had domain administrator privileges, the malware had complete access to every server and file system on the network.

We had to cease operations for 48 hours to clean up the mess and restore data. Despite our best efforts, some accounting data was irretrievable. It is my mission now to do all I can to make sure that never happens again in any place where I'm responsible for network security.

Not Reportable

The other night, as I glanced through the alerts, I noticed that a temporary employee's computer had picked up some malware. The data led me to believe that the temp had visited several Web sites deemed inappropriate by our acceptable-use policy. I also wondered why a temporary employee was working after hours, unsupervised. And I had other questions: Had the employee been advised of our acceptable-use policy and then signed an acknowledgment form? Had he taken the security awareness training? How about training on sexual harassment awareness? Web browsing that violates the acceptable-use policy could well open us up to a lawsuit on sexual harassment grounds.

> It's unusual for us to receive even a handful of alerts on any given day, so this caught my attention.

In the meantime, the antivirus software showed that the malicious files had been quarantined and removed. There were no more alerts, and with our network out of danger, I was able to go home and get a good night's sleep.

Early the next day, I pulled in my two senior people and explained that because this had been a breach in our security process, we needed to follow the procedures for responding to a security incident. I then learned that the system of one of my own team members had also contracted a Trojan horse, potentially from inappropriate Web browsing.

Well, if this was going to be one of those days, at least we would be able test the CIRT (Computer Incident Response Team) process. We would also be able to reinforce in the minds of the agency's managers and supervisors that they are responsible for their employees' Web wanderings, for their security awareness training and thus, in a way, for the security of our network.

The reason we have never tested the CIRT process is that our focus has always been to avoid all reportable incidents. As a result, incident response hasn't gotten a lot of attention, but we have good reason for this attitude. Security events that fall under the "reportable incident" category must be disclosed to the state's chief information security officer and the attorney general's office. Once reported, they would probably hit the local newspapers, if not the national news. And incidents that violate HIPAA security legislation must be reported to the federal Centers for Medicare and Medicaid Services. I think I would hang up my security hat if we ever had a reportable incident.

Fortunately, this wasn't as serious as that. The only issue was a potential violation of the acceptable-use policy.

Guerrilla Radio

I sat down with the employee from my group, and he told me that he had left work at 4 p.m. and had not returned. He explained that his system kept getting infected and he didn't know why. He had been manually cleaning it up almost weekly and had asked for help. I had one of my senior people take his system and analyze it. Our current theory is that the malware victim's practice of listening to Internet radio could be opening up his system to Trojan horses. There's nothing more required beyond documenting the incident and resolving the issue.

We'll go through the incident-response steps with the other employee as well: forensic analysis of the system, documentation, formal report, notification to management. I'd prefer life without malware infestations, but that probably isn't possible. So it feels good to get this incident-response process formalized. And the timing is perfect, since I'll be meeting this week with the state's chief information security officer, who recently asked for my help in formalizing the process at the state level.

I just might be prepared to do that.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**.

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

Texas May Mandate PCI Compliance

The Texas House of Representatives voted 139-0 in favor of a bill that would require a breached merchant to reimburse banks and credit unions the costs associated with blocking and reissuing credit cards if the merchant wasn't compliant with the Payment Card Industry (PCI) data security standard at the time of the compromise. The bill also protects companies from such liability if they are breached. State Senate approval is still needed.

TJX Breach Cost Retailer $12M in Q1

The TJX Companies Inc. announced that it took a $12 million first-quarter charge in connection with the massive data breach it disclosed in January. The after-tax charge of 3 cents per share included the costs involved in investigating and containing the intrusion, beefing up computer security and communicating with customers, as well as legal fees and other expenses, the company said in its earnings statement for the quarter that ended April 28. TJX said it expects to incur another charge of 2 to 3 cents per share in the second quarter.

Interoperability Check Gets Faster

Crossbeam Systems Inc. has cut from eight weeks to a single day the time needed to guarantee the interoperability of security applications running on its multiserver unified threat management devices. The iBeam program provides a virtual environment in which to test applications and verify that they will work with other applications on the hardware.

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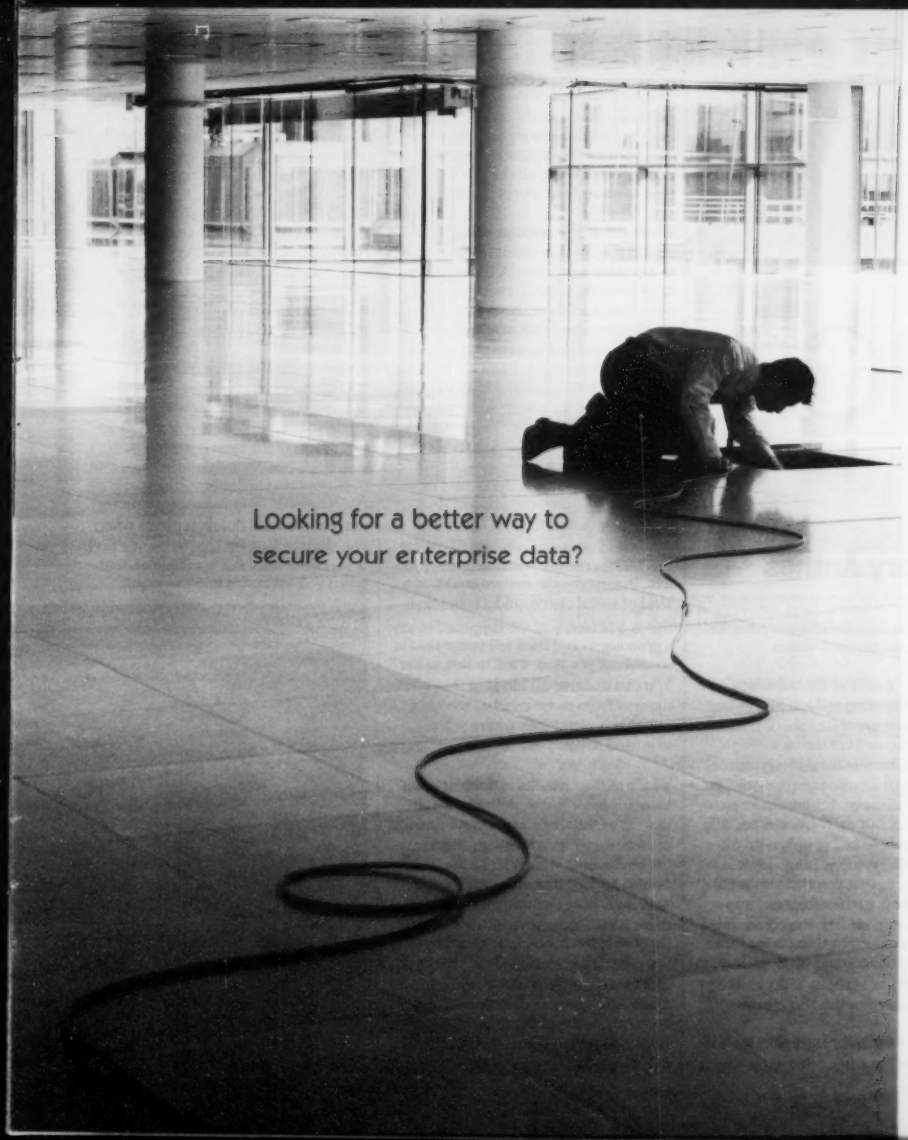

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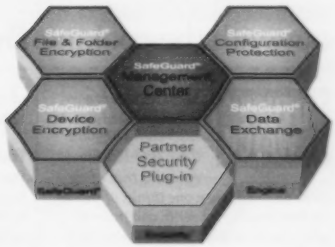

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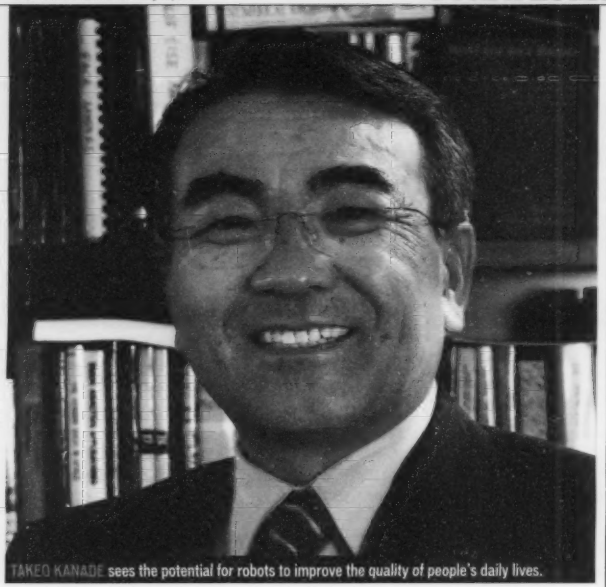


TAKEO KANADE sees the potential for robots to improve the quality of people's daily lives.

I, Coach

Someday, robots will do more than vacuum your floors. They'll train you and advise you — and maybe even help out with the cooking. By Gary Anthes

FUTURE WATCH

Takeo Kanade *is a roboticist, but his work extends far beyond the C3PO-like humanoids that often come to mind when one thinks of robots. He has been a pioneer in computer vision, smart sensors, autonomous land and air vehicles, and medical robotics.*

Kanade, a professor of computer science and robotics at Carnegie Mellon University in Pittsburgh, recently told Computerworld *that people's notions of what robots can and should do will change. Robots will serve as coaches and advisers, not so much replacing human labor as enhancing it.*

What's coming in human-computer interfaces? The trend toward computer vision is clear, and it will accelerate. In 10 years, I wouldn't be surprised to see computers recognizing certain levels of emotions, expressions, gestures and behaviors, all through vision.

What is the "quality-of-life technology" that you are working on? Intelligent systems [that incorporate robotics] have been developed over the past couple of decades, mostly for military, space exploration, hazardous environments and entertainment. I think they can do better for our daily lives, especially for older people and people with disabilities. The systems range from small devices that you carry to small mobile robots to the whole environment — home, streets, the community. The most important thing is for these systems to understand what the human wants to do, or is about to do, and then help them accomplish those tasks.

How could a computer know someone's intent? What I'm advocating right now is what I call inside-out vision. We think of putting cameras in the environment to observe you, which I call outside-in vision. But people don't like being observed. And, technically speaking, it's difficult, because it's important to know what you are looking at in order to know what you are trying to do, and the things you are looking at up close tend to be occluded by your body.

So the idea is to do it the other way and put sensors on you, looking out. They could be small cameras and maybe sound recorders. The computer then should be able to recognize objects that you are looking at, like a door you are approaching. [Because] the computer is looking from your viewpoint, it can understand what you are trying to do. We can put 1TB of memory on a small device with all the images of your home and neighborhood, all the places you tend to go and the routes you drive.

Where else might computer vision be applied? Imagine you train a person how to assemble a product. A trainer's job is to observe the trainee's actions, point out errors and show the right way. The job requires a lot of attention and patience, and that kind of one-on-one training is expensive. I can imagine the computer looking at what the trainee is doing and then giving some advice so the trainer can actually train more than one or two people. So the computer becomes a job coach.

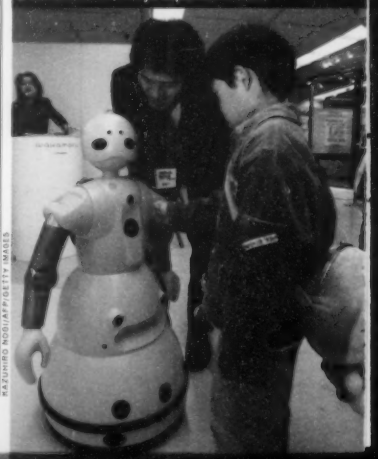
Some people forget the names of their friends and relations, and they are so embarrassed about that that they avoid going out, and that actually accelerates the progression of the problem. But maybe the system could, as a kind of social coach, understand that this is a person you are supposed to say a greeting to and then tell you, "This is so-and-so; you may want to talk to her." You can imagine all kinds of things, all the way from those coaches to the system that understands where you want to go and drives your wheelchair.

What's next for robotics in manufacturing? Humans have very excellent capabilities for evaluating some things, and for dexterity and speed. However, many car companies, for example, are beginning to realize that although the human does the assembly task very fast, there is still tedious work, like, "Bring that thing from the place it's stored to the place it's assembled," or, "Move the tool from one place to the other, and make sure each step has been done correctly and nothing forgotten." So maybe the robot is becoming more of a co-worker to help increase the quality that the human provides — indeed, to help the human work efficiently, reliably and economically. Many companies are thinking along the lines of, "Don't replace human labor; enhance it." It's consistent with the quality-of-life technologies.

For decades, science fiction writers have imagined homes populated with mobile robotic servants. Will we ever see that? I think so, but it may not be in the form of humanoids. They could be lightweight robots for a mixture of entertainment, information-providing and some mobility assistance, like Wakamaru [from Mitsubishi Heavy Industries]. But the home itself can be a robot, with many embedded sensors, possibly working with sensors attached to you. The home knows what a person is trying to do, like cooking, and helps.

What's the biggest challenge in developing these home robots and the quality-of-life robots? One, their capability to recognize human needs. Why are human caregivers so good? Because they understand what people want. The second thing is safety. How can we make the robot soft? Soft in two senses. One, in the physical sense; a human is a reasonably soft device, but very fast. And our control is soft, in the sense that we are failure-safe. When we make a mistake, most of the time it is not disastrous. We can at the last moment avoid disaster. Can the robot do the same? An automatic door is a robot, but the current model is dumb. It opens when you want to look outside to see if a taxi is there but does not open fast enough when you approach it in a hurry. ›

Mitsubishi Heavy Industries' WAKAMARU robot is designed to provide entertainment and information. Here, a boy plays rock-paper-scissors with a Wakamaru in a Tokyo department store.



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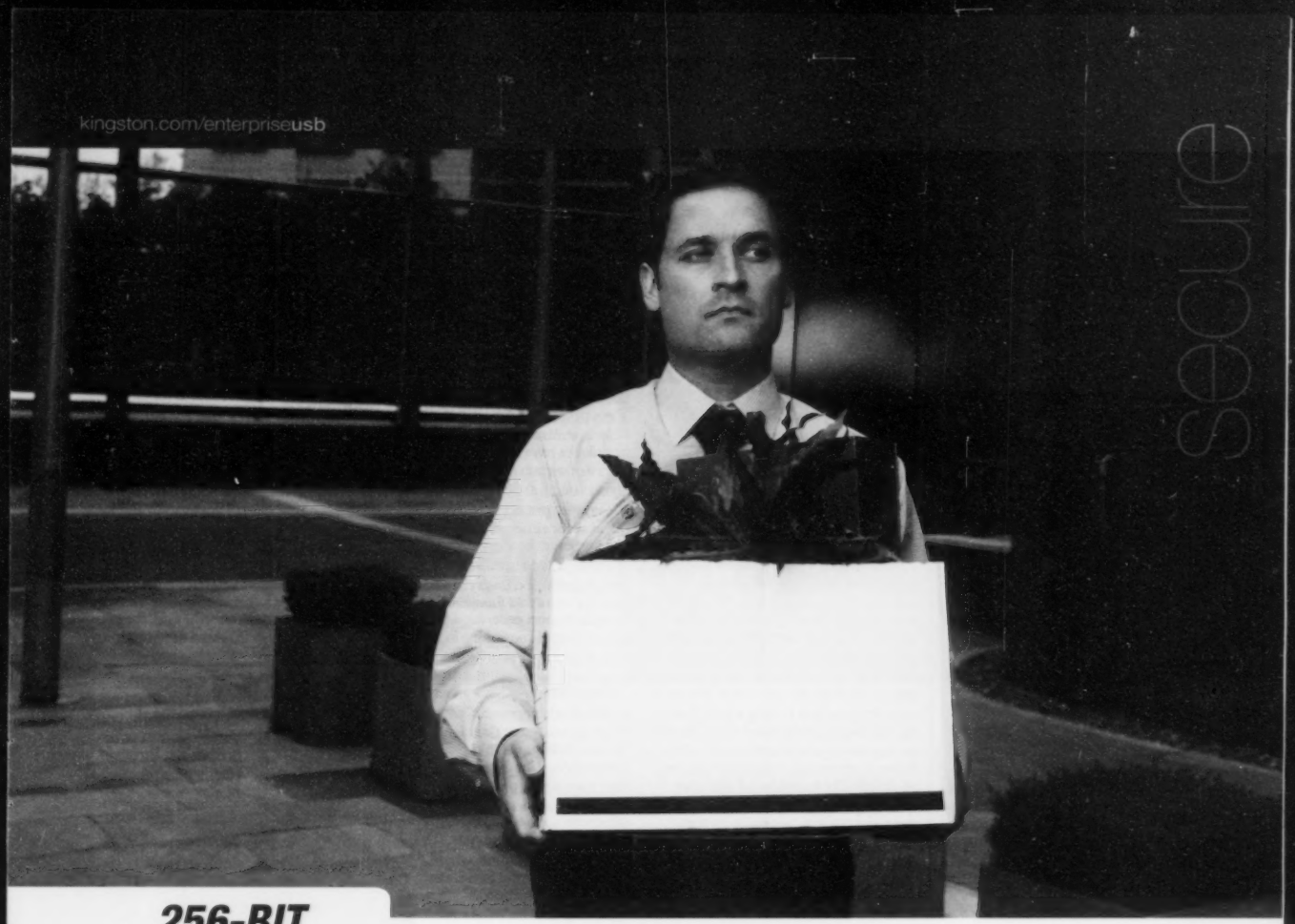

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Split-Second Trading

PREMIER 100 SPOTLIGHT

Wachovia's **service-oriented architecture** triples processing capacity at one-third the cost.

COMPANY: Wachovia Corporate and Investment Bank; Charlotte, N.C.

BUSINESS: Financial products and services for corporate and institutional clients, including investment banking, mortgage lending and auto-dealer finance firms.

PROJECT COST TO DATE: More than $10 million

IT STAFF: 1,300

SECURITIES TRADING is one of the few business activities where a one-second processing delay can cost a company big bucks. And the growing competitive push toward instantaneous trading is something that Wachovia Corporate and Investment Bank is addressing with a comprehensive systems overhaul.

In a project that has cost more than $10 million so far, Wachovia is tearing down its systems silos and replacing them with an infrastructure that stretches seamlessly across the firm's many investment products and business functions. It's effectively an information-processing utility for end users, who can dial up the capacity they need, when they need it.

And in the IT shop, the grid infrastructure allows application developers to concentrate on understanding and optimizing business functions. They can hand off the technical chores of product selection, configuration, operations and optimization to another group.

Tony Bishop, a senior vice president and head of architecture and engineering, leads that other IT group. He explains the rationale for the bank's new Service Oriented Enterprise Platform this way: "Competitive advantage comes from your math, your workflow and your processes through your systems. Straight-through processing is the utopian challenge for Wall Street firms."

BY GARY ANTHES

The first step in the project, Bishop says, was to prepare a matrix that cross-referenced every major function (such as research, risk management, selling, trading, clearing, settlement, payment and reporting) to each major product (debt and equity products, asset-backed finance, derivatives and so on). The project team then had to take a hard look at the existing systems in each cell. Some, such as clearing and settlement, were deemed commodity functions that could be satisfied by commercial software packages. Others, such as risk management and trading, needed a custom approach built on the most advanced business processes and technologies.

Says Bishop, "We looked at the current systems and said, 'Where can we build standardized frameworks, components and services that would allow us to, instead of building it four different times in silos, build it once and extend it into one common sales platform, one common trading platform and so on?'"

The resulting Service Oriented Enterprise Platform includes clients built around the Microsoft .Net Framework and a business and data-execution services framework running Java-standard components, including the JBoss application server. The service-oriented architecture uses IBM WebSphere DataPower SOA Appliances (a combination of hardware, firmware and software) and WebSphere Enterprise Service Bus for XML Web services security, performance, routing, integration and transformation. The whole thing is connected to a 10,000-processor grid using GridServer and FabricServer from DataSynapse Inc.

In its data centers, Wachovia brought in Verari Systems Inc.'s BladeRacks with quad-core Intel processors. The blade racks use a unique kind of vertical cooling that Bishop says reduces energy consumption by 50%.

Bishop says he's creating a "data center in a box," because Verari also makes storage blades that can be tightly coupled with processing blades in the same rack. The processing load at the bank involves a great deal of reading and writing to temporary files, and the intimate linkage of computing and storage nodes makes that extremely efficient, he says. The efficiency of the blades, the power of the IBM DataPower Appliances, plus other optimization and streamlining techniques have boosted the performance of certain mission-critical functions as much as 50 times, Bishop says. "We now do pricing in milliseconds, not seconds, for either revenue protection or revenue gain," he says.

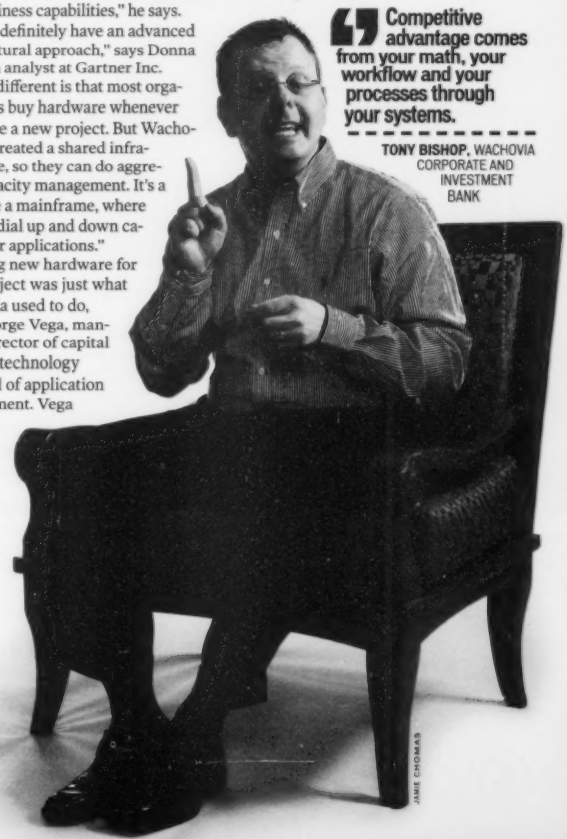
The advanced infrastructure has tripled processing capacity at one-third the cost, for a ninefold financial return, Bishop adds. Report generation that used to take 16 hours is now done in 15 minutes. "This is where IT becomes the enabler to new business capabilities," he says.

"They definitely have an advanced architectural approach," says Donna Scott, an analyst at Gartner Inc. "What's different is that most organizations buy hardware whenever they have a new project. But Wachovia has created a shared infrastructure, so they can do aggregate capacity management. It's a little like a mainframe, where you can dial up and down capacity for applications."

Buying new hardware for each project was just what Wachovia used to do, says George Vega, managing director of capital markets technology and head of application development. Vega says the heads of equity, sales, research and so on used to come to IT saying, " 'I need, I need, I need.' Then someone like me would have taken all the money and put in some tactical, silo solution."

"Now we actually have a provisioning strategy, a service strategy, so developers spend more time focusing on the business solutions and logic," Vega says. He says his application developers have boosted their productivity by 40% because they no longer have to deal with nuts-and-bolts technical issues every time they start a new project.

While Vega and Bishop are quick to point to the benefits that come from the new grid infrastructure, it clearly required a huge amount of analysis and planning. "Every application and infrastructure component has a life cycle associated with it, and they have thought this through from the beginning to the end," says Scott. "That's not an easy thing to do. But once they went through the hard work, now they get the benefit, because now they can develop things much quicker."



> **Competitive advantage comes from your math, your workflow and your processes through your systems.**
>
> **TONY BISHOP,** WACHOVIA CORPORATE AND INVESTMENT BANK

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>> SESSION 2

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BART PERKINS

How to Jump-start Records Management

RECENT LEGISLATION and litigation have made effective records management critical (see "Records Retention: Who Cares?" April 16). As a result, records management is receiving increasing amounts of attention. Forrester Research Inc. predicts that the records retention market will grow from $100 million in 2004 to $1.6 billion in 2007.

BART PERKINS is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. Contact him at **BartPerkins@LeveragePartners.com.**

When organizations initially recognize the importance of records retention, they sometimes attempt to save everything. If you do this, the amount of data you retain will quickly grow so large that it will become impossible to manage effectively. Worse, you may retain something embarrassing that you could have deleted.

Instead, use these guidelines for effective records management:

Involve every department. Representatives from across the company should develop the retention requirements. Involvement of your legal department is also critical. If that department's understanding of the latest legislation and court cases is weak, retain outside counsel.

Ensure that retention policies are current. A comprehensive records-retention policy identifies each record type and any regulations governing that type of record. It also defines the record's retention period. This can be tricky. For example, the SEC and the IRS sometimes require different retention periods for the same record. The policy also should describe circumstances for approved deletion, along with acceptable deletion methods. These policies can become mind-numbingly detailed and complex. For example, e-mails regarding lunch plans can theoretically be safely deleted — unless they would become critical during a lawsuit to prove when two individuals met. No policy can protect you from the hazards of litigation, but without any specific policies, you are headed for danger. Once you have a retention policy, update it periodically.

Establish a position responsible for records management. Compliance requires day-to-day attention. Without a watchdog, retention policies are unlikely to be followed. If you don't already have such a position, you can hire someone with the expertise you need through an organization specializing in this area, such as the Institute of Certified Records Managers.

Define records broadly. Historically, records requiring retention have been found in corporate databases. However, recent court cases have relied on different types of data, including e-mails, text messages, IMs, toll tag records, building access records, video surveillance files, time-clock data and early versions of documents that were "deleted" from a PC hard drive. Carefully consider what to retain, and don't forget paper files!

Organize archives. Separate backup archives from record retention archives. Backups are used to restore data after system failures and are regularly overwritten. Record retention archives are corporate records that require secure storage for a predetermined period. Records that don't require retention should be purged, and retained records should be organized to facilitate easy searching and retrieval. Moreover, according to the Federal Rules of Civil Procedure, retained records must be maintained in ways that prevent them from being inadvertently (or maliciously) modified or destroyed.

Manage data formats and media. Data storage formats change frequently. In addition, digital media degrades quickly; writable CDs may become unreadable in less than 10 years. Even high-end tapes have at most a 25-year life span — assuming you still have a tape drive that can read them.

Delete thoroughly. Once you find it, paper is easy to shred and burn. Electronic data is more complicated. Records management must include an effective method of identifying and destroying duplicate records. Classified or confidential information should be deleted according to Department of Defense standards.

Stop all deletions immediately when facing legal action. If you continue to delete relevant records after you are notified of (or even suspect) a potential suit, the court can assume that the deleted records were incriminating. After Frank Quattrone learned that Credit Suisse First Boston was facing investigation, he sent an e-mail to staffers that contained the bank's retention policy, with a reminder to "catch up on file cleaning." He spent three years fighting an obstruction of justice case before the charges were dropped.

Monitor supplier compliance. You are responsible for records retention even after outsourcing a business process. The Sarbanes-Oxley Act, in particular, is very clear that simply assuming that your business partners are compliant doesn't absolve you of responsibility.

Many companies are just beginning to realize the importance of an effective records management program. Recent legislation demands compliance, and penalties can be enormous. No one is exempt. In the past month, Intel and the White House have fallen into this pit. Records retention may be boring, but ignore it at your peril.

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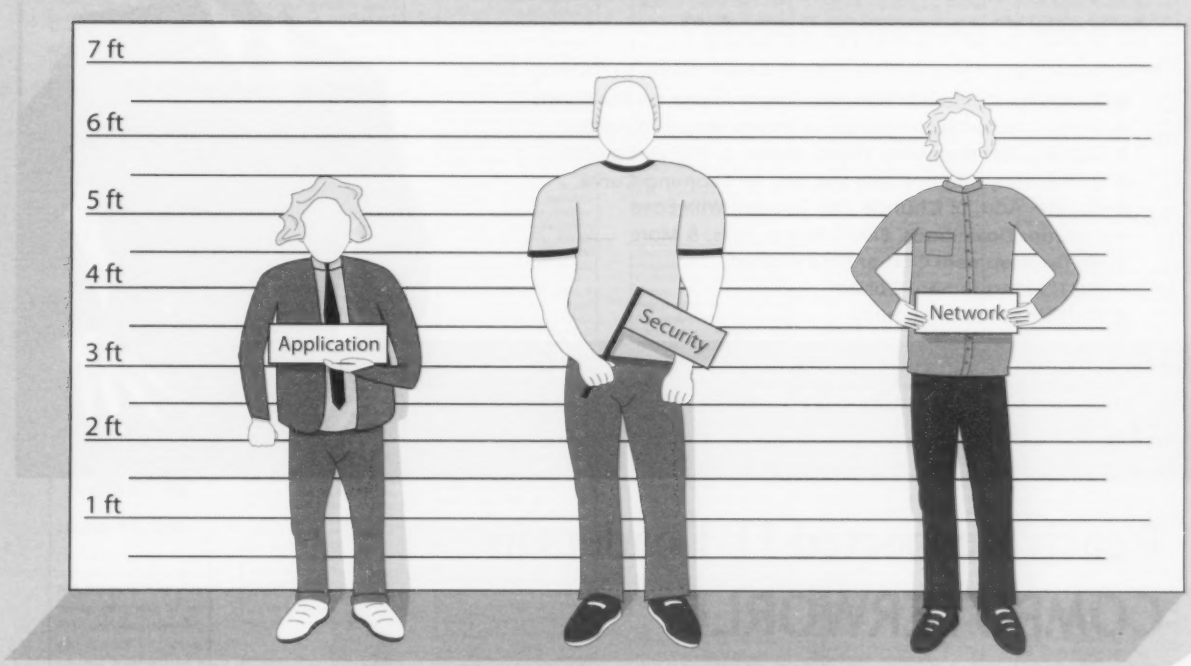

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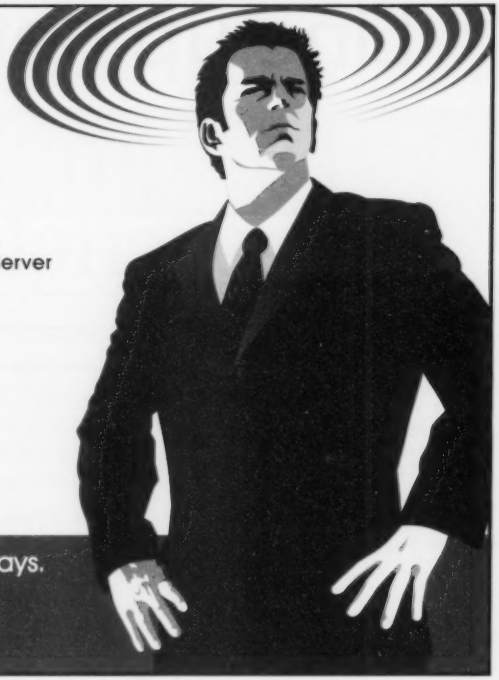

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Microsoft

short term. "It's like saying, 'I have a big baseball bat, and I'm going to hit somebody,' " Lindsay said. "Everyone runs away."

But he predicted that in the long run, Microsoft will suffer the most damage, because it should be focusing more on developing innovative products than on threatening other vendors that have outsmarted it. "Their business model is fundamentally changing, and Microsoft is using [the specter of] the courthouse to extend their old way of doing business," Lindsay said.

'Just Business'

On the other hand, Beach Clark Jr., vice president of IT at Georgia Aquarium Inc. in Atlanta, described Microsoft's patent tactic as "just business." The software vendor has a right to protect its patents against infringement, Clark said, although he added that comments implying that Microsoft would like open-source users to pay it royalties weren't "a good PR move."

Microsoft executives first fired the shot across the open-source community's bow in a story published by *Fortune* magazine last Monday. In a statement Microsoft issued confirming the patent claims, the company said it was speaking out because of concerns that Version 3 of the GNU General Public License "attempts to tear down the bridge between proprietary and open-source technology that Microsoft has worked to build with the industry and customers."

Microsoft wants to sign more deals with open-source software vendors like the one it announced last November with Novell Inc., which agreed to pay Microsoft a share of the revenue from sales of its SUSE Linux operating system. The two companies also promised not to sue each other's customers for patent infringement.

Horacio Gutierrez, Microsoft's vice president of intellectual property and licensing, said last week that the deal with Novell "meets the needs of customers, furthers interoperability [between Windows and Linux] and advances the interests of the industry as a whole." But the latest draft of GPLv3 includes language that could make similar agreements legally impossible.

The director of technology at a metals manufacturing company based in the Midwest said he approves of the partnership between Microsoft and Novell "because like it or not, it gives Novell more viability." The metals company runs SUSE Linux on about 125 servers, according to the technology director, who asked not to be identified.

He said he isn't concerned at all about Microsoft's patent-infringement claims. "At this point, it seems like they're staring some people down and seeing if they flinch," he said.

Bill Hilf, Microsoft's point person on open-source initiatives, told the IDG News Service that the vendor has no plans to start suing companies for patent infringement — a comment that matched the company's assertion earlier in the week that it prefers licensing to litigating.

"I'm trying to be as clear as I can to people that this isn't a threat," Hilf said. "We're not going out and attacking people. We're trying to solve an [intellectual property] issue." (See Q&A, above.)

Despite those soothing words, Harry Roberts, CIO at Boscov's Department Stores LLC in Reading, Pa., said via e-mail that he is still evaluating Microsoft's position. "It is an interesting about-face, just when everyone thought that Microsoft was finally accepting the reality that Linux is here to stay and that open-source has found an expanding following," he added.

Broward County Public Schools in Florida uses a wide range of Microsoft and open-source applications to support its 270,000 students and staff members. "In the long run, I think that open-source will prevail," said Vijay Sonty, the Sunrise, Fla.-based school district's CIO. Microsoft may be "the big gorilla" right now, he added, "but there's too much power behind open source."

Computerworld's Eric Lai and Gregg Keizer contributed to this story, as did Elizabeth Montalbano and Jeremy Kirk of the IDG News Service.

Patent Math

Microsoft's breakdown of the number of its patents being infringed by different types of open-source software:

- **Linux's user interface** — 65 patents
- **The OpenOffice.org application suite** — 45 patents
- **The Linux kernel** — 42 patents
- **Open-source e-mail applications** — 15 patents
- **Various other open-source applications** — 68 patents

Exec Says Microsoft Wants to License, Not Litigate

AS GENERAL MANAGER of platform strategy at Microsoft, **Bill Hilf** oversees the company's work with open-source vendors and projects. Hilf spoke with the IDG News Service following Microsoft's assertion in a *Fortune* magazine story last week that Linux and other open-source applications infringe on 235 of its patents. Excerpts from the interview follow:

Did you know beforehand that the company was going to reveal the number of patents that it claims are being infringed? We did. [But] the *Fortune* article does not correctly represent our strategy. That's what has people so inflamed. It looks like our strategy changed and we're moving in a new direction, but it hasn't. Our strategy has always been to license and not litigate as it relates to our intellectual property. So we have no plans to litigate. You can never say we'll never do anything in the future, but that's not our strategy.

What happened after the news broke? The people in the open-source community that I know well, they contacted me right away. All of the European guys I know called me at 2 a.m.; I told them what I told you. They said, "OK, that's what I needed to hear." The other question I got was, to be very honest, "Do you have a different strategy than the company?" – which I didn't understand at first.

I think [the effects] will be short term. Longer term, it will be fine, and the work [we're doing with open-source partners] will continue on.

In hindsight, do you think it was a good idea for Microsoft to release the number of patents? What we heard back after the Novell deal [last fall] was, "Give us more transparency. You say that there is IP involved; give us an understanding of what that is." So the [idea] was that if we give a number and category of where these things fall, maybe that will help people get an idea of the scope. We are very much calling out to commercial companies to license this stuff and resolve these issues. This isn't like a trivial invention. There are a couple hundred significant patents here.

– JEREMY KIRK

Microsoft Unlikely to Take Anyone to Court, Lawyers Say

MICROSOFT'S unwillingness to identify any of the patents it claims are being infringed by open-source technologies is a sign that the company is looking for licensing deals, not legal battles, according to several intellectual property attorneys.

"I think it's as much a marketing move as anything else," said Mark Wine, an IP lawyer and partner at McDermott Will & Emery LLP in Los Angeles. "If you're really serious, you sit down and have a discussion, and you tell [open-source companies] which patents. Or you sue them."

But Paul Lesko, who heads the IP litigation group at SimmonsCooper LLC in St. Louis, said that Microsoft's claims have "helped draw the lines" for any future infringement cases involving its patents. "It applies certain pressure [to open-source vendors] to find out how many of those patents are worth the paper they're printed on and how many are not," Lesko said.

Open-source and Linux evangelist Eric Raymond was more dismissive of Microsoft's actions – and its patents. "If Microsoft had sound and critically relevant patents to assert, they wouldn't need to screw around with vague threats," he said. "They'd simply publish the patent numbers, and it would be game over for Linux."

But Horacio Gutierrez, vice president of intellectual property and licensing at Microsoft, said last fall's deal with Novell was an attempt to create a "licensing mechanism" that offers open-source distributors a reasonable way "to reach an understanding" with Microsoft.

– ELIZABETH MONTALBANO, IDG NEWS SERVICE

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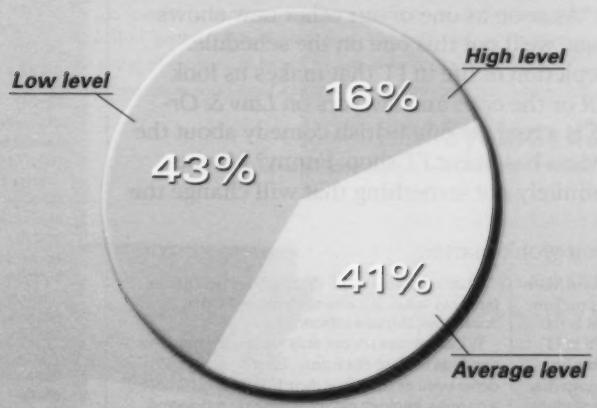

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FRANK HAYES ■ FRANKLY SPEAKING

Reality IT

COMING SOON to a TV near you: a show about corporate IT. No, really. Last week, NBC announced that its new show *The IT Crowd* would be a "midseason starter," which is network jargon for "As soon as one of our other new shows gets awful ratings, we'll put this one on the schedule."

Will this be an exciting depiction of life in IT that makes us look as good as the doctors on *ER* or the cops and lawyers on *Law & Order*? Well, no. *The IT Crowd* is a remake of a British comedy about the nerdy denizens of a windowless basement IT shop. Funny? Maybe. Exciting? Not likely. And definitely not something that will change the image of IT for the better.

But maybe, just maybe, that won't matter.

At least not if the Society for Information Management keeps hammering away at the problem.

Back in March, I wrote about how SIM is trying to get high school students interested in IT careers. SIM has targeted college students for some time but now is trying to get to kids earlier. I wished SIM luck, but I didn't think it had much chance of convincing kids that there's a great future for them in this business — at least not until we reinvent IT.

But I underestimated SIM. It turns out the organization's goal is, well, to reinvent IT — and to encourage kids to go after careers in that reinvented IT world.

For SIM, that means actually sending CIOs out to talk to students about the business side of IT — what former SIM President Stephen Pickett described to me as "the soft side of the business."

It also means working to push university IT programs to focus more on the business end of IT and encouraging IT education for students headed into business programs such as marketing and finance.

And it includes a slew of SIM programs to help bring CIOs up to speed as business leaders — research, training, leadership skill building.

This is a very, very smart approach. SIM isn't out there giving potential IT recruits a happy-talk song-and-dance designed to polish the image of technology. Students wouldn't believe it anyway, but more important, that's not what IT needs now.

IT needs people who understand the technology *and* understand the business — people who can talk the business talk and walk the technology walk.

That's the kind of IT that delivers maximum business value. It's also the kind of IT that doesn't get shipped offshore.

Which means it's not only what corporate IT needs as we face the future. It's also what students need as they face *their* future. They know a pure-technology career is built on quicksand. But a career where IT meets business — that's a sweet spot. It's valuable, it's flexible, it's much needed, and it's got legs.

That's the IT future that SIM is presenting to students — and, at the same time, working to create.

Yes, I'm impressed. Instead of moaning about the loss of CIO clout and the decline in IT enrollments, SIM is doing something about both of those problems. Last year, SIM's CIO volunteers talked to 4,000 students. This year, they have 13 sessions scheduled all over the U.S. With more volunteers and funding, they could reach more students.

But that depends on whether more CIOs are willing to do something that matters to address the future of IT.

That's the real world. Meanwhile, back in television land, it turns out there's actually *another* NBC show coming this fall that's about IT. Well, sort of.

That would be *Chuck*, in which the title character accidentally downloads government secrets into his brain, then keeps his day job in a corporate IT shop while he moonlights as a superspy fighting assassins and international terrorists, partnered with a sexy CIA agent who's also Chuck's first date in years.

That darn reality TV — it's everywhere these days.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com.**

Noises Off

Support manager pilot fish gets a critical trouble ticket from a remote site: The server is making a grinding noise, and the local guy says he thinks it's the hard drive or the CPU. "He offers his screwdriver skills, but I suggest a more subtle approach," fish says. "I connect to the server remotely and notice that while I can move the mouse around, I can't click on anything." Is the keyboard OK? fish asks. Local guy finally checks, and suddenly fish's remote mousing works – and the noise has stopped. What did you do? "He said there was a pile of papers on the keyboard and he moved them, and did I think that could have been the problem?"

SHARK TANK

12:00

Call center engineering manager calls IT pilot fish at home on a Saturday night. A big storm is expected the next day, and the call center is gearing up – but there's a problem. "The manager said, 'Can you come into the office? We can't get all of the necessary local television and national weather channels. Do you know what's wrong?' " fish reports. "I explained that the VCR probably just needed to be reprogrammed, and said, 'There's probably a menu or setup button on the remote control. You need to tell it to auto-program.' This went straight over his head, so I ended up coming in just to program the VCR. Has it been that long since people did this at home when the power went out?"

That'll Do It

It's the 1970s, and this technically challenged operations manager stomps into the computer room waving a sheaf of reports. "We're having too many unscheduled system restarts," ops manager tells shift supervisor. "We need to do something about this." Without missing a beat, shift supervisor turns to operator pilot fish sitting at the mainframe console and tells him, "From now on, whenever the machine crashes, schedule a restart."

Exorcised

User complains that her laptop makes "ghostly swishing noises" when she types, but not always – and not for this support pilot fish. "It only happens when she hits the backspace key, which she slides her hand up the right side of the machine to reach," says fish, who observes more closely. "Turns out the laptop's microphone is located on the lower right-hand side of the keyboard. It's not muted, so it transmits a swishing sound as she slides her hand over it."

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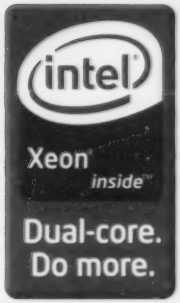

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